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The Verdict On Vista

How Do IT & Data Center Managers View Microsoft's New OS?

by David Garrett
• • •

IN NOVEMBER, Microsoft sent forth CEO Steve Ballmer to unveil Windows Vista to the business world at a well-publicized Nasdaq event. Vista, said Microsoft (www.microsoft .com), was the best OS the firm had ever built, long delayed but worth the wait thanks to its extensive testing, sleek design, and tight security.

But have customers listened? "We haven't even thought about it yet," says John Thomas of the Sacramento, Calif.,-based Herakles Data Center (www.her aklesdata.com), which offers colocations and a range of outsourced data center services to corporate clients. "All of our stuff is pretty stable, and we don't like to change too much because it affects our customers," says Thomas.

Indeed, a wait-and-see approach seems to be the norm. Nauman Haque, senior research analyst for the Info-Tech Research Group, says that enterprise users have treated Vista with more caution than consumers have because consumers often take the OS that comes with their computers. "For enterprises, however, they do have that freedom of choice," says Haque. "And in many cases, that freedom comes with a price. For businesses, it's a much more complex decision."

Factors Galore

For the average small to midsized enterprise, a Vista migration entails hundreds or even thousands of desktops, notebooks, and servers—no small task by any standard. And migrations bring complications, among them problems with existing office hardware. "Microsoft has been slow to release new drivers for Vista," says Haque, adding that application compatibility—especially for custom software—is also a concern.

His advice to clients grappling with a large-scale Vista upgrade? "It might be worth taking a year to test your applications and drivers and *Go to Page 11*

One-Time Password Technology

An Established Technology Gets More Attention

by Sixto Ortiz Jr.
• • •

SECURING THE DATA that employees carry around as they go about their daily business is priority No. 1 for businesses today. The stakes are high: Data loss is just the kind of incident that can give a business all kinds of publicity for all the wrong reasons.

But many enterprises large and small continue to rely on antiquated password technology to secure many of their critical systems. Passwords are only as secure as the individual generating them, and security takes a hit when users neglect to develop strong passwords and instead rely on easily remembered character sequences. One-time password technology claims to resolve this issue by generating passwords that constantly change.

Sophisticated Defenses Needed

A huge reason why OTP (one-time password) technology—and other security technologies—is gaining attention is the ongoing threat from increasingly sophisticated phishing, pharming, and malware attacks perpetrated by criminals motivated by financial gain, says Larry Hamid, CTO of MXI Security. "The movement is no longer just hackers but is now in the *Go to Page 11*

> A huge reason why one-time password technology is gaining attention is the ongoing threat from increasingly sophisticated phishing, pharming, and malware attacks.

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Cooling For Cramped Spaces

MovinCool CM12 Ceiling-Mounted Unit Designed To Save Space & Money

SPOT COOLING IS an energy-efficient alternative to central air conditioning. But often the main roadblock to efficient cooling of cramped server telecom and equipment rooms is the lack of floor space to accommodate a roll-in portable spot cooler. The MovinCool CM12 offers a convenient solution: It's a lightweight, space-saving, easy-to-install ceiling-mounted unit.

The CM12 delivers 10,500Btu/H of cooling in a self-contained unit that mounts easily with off-the-shelf hardware. It connects to a standard 115V, 15-amp circuit.
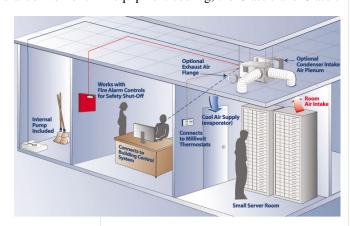
The CM12 features the shortest top-to-bottom profile in the industry—only 15.5 inches—ensuring it will fit into nearly any drop ceiling. In addition, the CM12 comes with several cost-saving capabilities and safety features:

- Conveniently controlled by most off-the-shelf Millivolt thermostats
- Works with fire alarm controls for safety shut-off
- Self-contained system requiring no refrigerant piping
- Built-in supply and return air flanges enable easy duct installation and improved air circulation
- Warning signals and alarms for condensation overflow and unscheduled shutdown can be wired to a central location
- A standard internal pump

- Mounting brackets designed for off-the-shelf mounting hardware

In addition to the CM12, MovinCool offers the Office Pro lineup of portable spot cooling solutions for low-temperature equipment cooling; the Classic and Classic

Plus Portable Series for harsh environments; and the PC7 Portable Air Conditioner for individual hot spots.

MovinCool CM12
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Terazilla Offers 24TB Storage

Scalable Storage Server Provides 800Mbps Data Rates

INDIVIDUALS AND BUSINESSES involved in content creation are seeing demands for localized storage growing quickly, and technology companies are responding with new high-density storage approaches such as the 24TB "Terazilla" platform by Aberdeen.

"We keep getting more and more demand for systems with more hard drives and total capacity," says Trenton Baker, marketing manager for Aberdeen's custom server business. "There are fast-growing requirements for near-line storage with high transfer rates. In particular, the video production market is seeing their data growing exponentially as they are preparing for the high-definition change that is ongoing."

The Stirling X633, or Terazilla, can be configured with a total of 24TB of storage within 32 hot-swappable drive bays. It uses dual RAID controllers to deliver transfer speeds of over 800Mbps. The system also includes dual quad-core Xeon processors, a triple redundant 1,350-watt power supply, and up to 32GB of fully buffered DIMM memory. Fully configured, the platform is priced around $22,400.

The system can also be configured with as few as two hard drives and one processor for about $7,000, allowing smaller businesses to add additional hard drives

and processors as they may be needed for growth, Baker says.

"We are self-customizable," he says. "We have an online configurator where you can pick and choose your processors, memory, hard drives, and then mix and match as you go. Anyone that needs real-time transfer speeds, or who may be working with high-definition files, is finding they need a lot of storage, and they need it quick."

Aberdeen's Terazilla platform can also be expanded beyond 24TB of total storage through the use of a SCSI port that can be used to add DAS boxes. The "storage boxes" can be used to add storage without the need to add additional processors, Baker says. In total, a "supersized" platform can provide more than a petabyte of storage.

Aberdeen Stirling X633 Terazilla
Starts around $7,000
Up to 24TB in a single rack, with transfer speeds of 800Mbps
(562) 699-6998
www.Processor.com/Terazilla-X633

Affordable Hybrid NAS & iSCSI

StorBank-XL Offers Extensive Feature Set In A Reliable, Scalable Package

TODAY'S SMALL TO MIDSIZED enterprises need a versatile storage platform that combines simplicity, advanced functionality, and scalability in a high performance, highly reliable package. DNF Storage's Stor-Bank-XL product family meets these needs by providing an innovative hybrid of NAS and iSCSI (File and Block modes) in one intuitive system.

The StorBank-XL is ideal for disaster recovery or disk-to-disk backup. Because the StorBank-XL offers both NAS and iSCSI, multiple applications can take advantage of the same storage pool whether users are sharing files via NAS or an individual application's iSCSI volumes. The StorBank-XL offers a central platform to manage all storage requirements across the entire organization. Installation and setup are simple: any StorBank-XL configuration can be up and running in about 15 minutes.

The StorBank-XL uses SATA technology to provide storage capacities ranging from 500GB to 12TB. High-performance features include one or two dual-core storage processors, up to 12GB RAM, dual Gigabit Ethernet connections, and software RAID or efficient hardware RAID.

Immediate backup and restore. Stor-Bank-XL's Snapshot function offers flexible scheduled snapshots for data protection, system tests, and nearline disaster recovery.

Volume and file replication. Stor-Bank-XL replication lets users create a copy of any file and volume or share and keep two identical copies on the network. The iSCSI target replicates data in real time.

Easy storage management. Management of all advanced features is easy and convenient with unified task manager. From a central admin page, an administrator can schedule replication, backup, and snapshots. A Web-based, password-protected GUI means the StorBank-XL can be easily managed from anywhere within the network, making remote management simple.

DNF Storage StorBank-XL Family
An affordable hybrid technology (NAS+iSCSI) storage platform that includes features such as NAS share creation, scheduled snapshots, and NAS-based and iSCSI replication
(800) 947-4742
www.Processor.com/StorBank-XL

WinINSTALL 9.0

Features Simplify Updates & Security Checks

EVEN WHEN THEY WORK PROPERLY, a company's Windows desktop and server computers need a fair amount of care and feeding—installs, software updates and upgrades, and vulnerability scans. Problems mean diagnostics and remediation. The more of these tasks that can be done remotely, or automatically, the better.

One option is Attachmate's WinIN-STALL, a unified one-console lifecycle management system providing asset management, software deployment, and patch management functions. WinINSTALL also automates OS migration, PC refresh, and PC recovery. "We offer zero-touch operating systems deployment, which integrates the OS, software packages, and end-user personality into a single MSI package, and deploy it from one console and a common workflow," says Michael Miller, product manager at Attachmate.

WinINSTALL's latest version 9.0 adds a number of new features. "We've improved vulnerability management and remediation deployment in Version 9.0—IT administrators can now schedule when a vulnerability scan is and also select which updates to apply and when, rather than interfere with when a user might be active," says Miller. "Also, Version 9.0 lets you convert patches and security updates into software packages, which you can use for deployment."

The Two-Phase software installation feature separates delivery of software packages from installation. Working with WinINSTALL's Checkpoint Restart and Bandwidth Throttling features, this makes it easier to update computers over low-bandwidth or intermittent connections, such as dial-up and wireless.

WinINSTALL users can now integrate third-party remote control and help desk applications on the managed PCs directly from the WinINSTALL console, as right mouse-clicks. "This lets IT staff use remote-control solutions like VNC, Symantec's pcAnywhere, or Microsoft's Remote Desktop Connection from within WinINSTALL," says Miller. "IT can initiate a Windows Remote Desktop session from the console by selecting any managed machine and right-clicking."

WinINSTALL includes the WinIN-STALL MSI Packager and the WinINSTALL Desktop Availability Suite, the WinINSTALL Desktop Management Suite, and the WinINSTALL Software Distribution Suite.

Attachmate WinINSTALL 9.0
MSI Packager: Starts around $1,200 Client-side modules: Around $25 to $30 each Version 9.0 is available as a free upgrade for all maintained customers
Version 9.0 of Attachmate's WinSTALL adds third-party integration and more flexible installs and updates
(206) 217-7100
www.Processor.com/WinINSTALL9

MarketPlace ▲▼ NEWS

Microsoft Makes Licensing Revisions

IN A MOVE INTENDED to grant enterprise customers increased flexibility in deployment, Microsoft has changed the licensing model for Windows Vista. The options, which are exclusively available to Software Assurance software maintenance program customers, are for two new centralized architectures based on Vista's Enterprise Edition. The first option, a subscription license named Windows Vista Enterprise Centralized Desktops, lets users run virtual machines centralized on server hardware. Customers will pay a yearly fee per device depending on what they're licensing. The second option, which will be free to Software Assurance subscribers, lets users run Vista on PCs that do not have hard drives or the capability to store data locally.

H-1B Cap Reached

IN THE SAME DAY that U.S. Citizenship and Immigration Services began accepting applications for H-1B visas, the 65,000-visa cap was reached. The applications received, which numbered about 150,000, set a record at the agency for the number of applications received that quickly. For the U.S. fiscal year beginning Oct. 1, there is a main visa cap set at 65,000. However, an additional 20,000 visas are available to those who have received an advanced degree from a U.S. university. Applicants will be granted visas through a random computer-generated process, and any additional applications received from now on will be rejected.

H-1B-Related Bill Introduced

TWO UNITED STATES SENATORS introduced a bill aimed at curbing potential abuse of the H-1B system. The bill, crafted by Iowa's Chuck Grassley and Illinois' Dick Durbin, would require employers that want to hire H-1B workers to first make a "good faith" effort to hire American workers. In addition, employers would not be able to advertise job openings only to those with H-1B visas and must ensure any H-1B visa holder they hire does not displace an American worker. The bill also aims to change the method used to calculate the prevailing wage used to pay H-1B workers.

No Cell Phone Calls In-Flight, FCC Decides

SINCE 2004, the Federal Communications Commission has been considering reversing the ban on people talking on their cell phones in airplanes while they are in-flight. The FCC asked for feedback from airline travelers to get an idea on how the majority felt about cell phone usage on flights. Ultimately, the FCC has decided to keep the ban in place, with its main concern being potential interference with cell phone signals on the ground. For now, the FCC says the issue is settled, but it says it may "reconsider this issue in the future if appropriate technical data is available for our review."

FCC Issues Pretexting Rules

UNDER NEW RULES designed by the FCC, phone companies would be prohibited from releasing sensitive personal data, including call detail records, without a password. The FCC-issued order would also require phone companies to alert customers to any account changes, including such things as creating or changing an online account or password or the address of record. In addition, phone companies would also have to annually certify their compliance with the regulations and provide the FCC with information regarding the unauthorized release of customer information. The Office of Management and Budget must approve the new rules before they can go into effect.

First Data Sold

THE BOARD OF DIRECTORS at First Data unanimously approved an agreement that will sell the electronics payments and commerce company to an affiliate of Kohlberg Kravis Roberts & Co., private equity firm, for $29 billion. As part of the agreement, First Data has the option to field bids from other third parties during the next 50 days. If no other offers are made, after that time, First Data and KKR are expected to close the deal by the end of Q3, pending shareholder and regulatory approvals. The deal values stock of First Data at $34 per share, which is a 26.4% premium over the company's common stock.

VeriSign To Raise Domain Name Fees

VERISIGN WILL RAISE the fees it charges for registering .com and .net domain names beginning Oct. 15. The fee for .com domains will increase to $6.42 from the current $6; the fee for registering .net domains will now be $3.85, up from the current $3.50. VeriSign says the fee increases—the first since the fee structure was implemented in 1999—are necessary to help handle the increased volume of Internet traffic and DNS queries and the need to defend against increasingly sophisticated cyberattacks. In 2000, VeriSign was handling about 1 billion queries a day; today that figure averages 30 billion a day.

Xerox Buys Reseller

IN A DEAL EXPECTED to close next month, Xerox announced it will acquire Global Imaging Systems for $1.5 billion in cash, or $29 per share. Global Imaging, which has about 200,000 customers, is an integrator and reseller of Ricoh, Konica Minolta, and Sharp products located in Tampa, Fla. After the acquisition is complete, Global Imaging will become an independent unit of Xerox. Among the Xerox products that will be added to the Global Imaging product line will be the Phaser group of office products.

Microsoft Announces New Piracy Suits

MICROSOFT IS CRACKING DOWN on retailers and other groups that have been illegally selling copies of Windows and Office that are discounted for academic use and are marked "Student Media" and "Not for retail or OEM distribution. Not for resale" to regular users, not students. Microsoft has sent out more than 50 letters warning of legal action and has filed nine lawsuits. It filed the suits in the United States, but they're aimed at international groups impersonating academic resellers in the Middle East who then resell the reduced-price versions to Internet retailers, who sell the software at retail prices to unwitting buyers in the United States.

Acer No. 3 In Mobile PC Sales

ACER HAS CLAIMED the No. 3 spot in the mobile PC market, overtaking Toshiba, according to the latest information from iSuppli, a market research firm. Acer sold 3.37 million mobile PCs during the fourth quarter of last year, a strong 46% year-over-year growth. HP claimed the No. 1 spot, selling 5.05 million mobile PCs, for a year-over-year growth of 52%, the best of any vendor during the quarter. Dell came in second, selling 3.52 million units, up just 4.2% from a year ago.

Google Announces New Data Center

LAST YEAR, A GOOGLE subsidiary purchased land at the Mt. Holly Commerce Park near Charleston, S.C., and now Google plans to invest $600 million to build a new data center on the 518-acre site. As part of South Carolina's Job Development Credits program, the state will partially reimburse Google, which plans to use as many local vendors as it can in the building process so the local economy gets the most benefit. The Internet search and ad giant expects the new data center to employ about 200 people when it opens. Meanwhile, Google has already begun building a new data center in Lenoir, N.C., and it's considering another site in South Carolina.

Latest "Green" Rankings Announced

ACCORDING TO THE MOST recent "green rankings," which were recently published by environmental organization Greenpeace International, Lenovo Group tops the list, while Apple came in last. The rankings of the world's largest electronics companies are based on recycling and toxic-content policies. When the list was first released last August, Lenovo held the bottom spot, but the company has steadily improved. Other top tech companies include Nokia, Sony Ericsson Mobile Communications AB, Dell, and Samsung Electronics. Joining Apple at the bottom of the list are Toshiba, Sony, LG Electronics, and Matsushita Electric Industrial's Panasonic Corporation of North America unit.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	April 2 $	April 9 $	% change from previous week
Avaya	AV	$11.43	$11.94	$12.42	▲ 4.02%
BEA Systems	BEAS	$13.05	$11.79	$12.37	▲ 4.92%
Computer Associates	CA	$26.89	$25.85	$26.24	▲ 1.51%
Cisco Systems	CSCO	$21.59	$25.40	$26.20	▲ 3.15%
Dell	DELL	$29.73	$23.02	$23.71	▲ 3%
Electronic Data Systems	EDS	$27.01	$27.76	$27.70	▼ 0.22%
Google	GOOG	$389.70	$458.53	$468.21	▲ 2.11%
HP	HPQ	$33.53	$40.31	$41.34	▲ 2.56%
IBM	IBM	$83.06	$95.21	$96.62	▲ 1.48%
Intel	INTC	$19.35	$19.13	$20.10	▲ 5.07%
McAfee	MFE	$24.50	$28.98	$29.04	▲ 0.21%
Microsoft	MSFT	$27.56	$27.74	$28.57	▲ 2.99%
Oracle	ORCL	$13.79	$18.14	$18.57	▲ 2.37%
Red Hat Software	RHT	$27.91	$22.31	$21.87	▼ 1.97%
Sun Microsystems	SUNW	$5.09	$5.80	$5.93	▲ 2.24%
Symantec	SYMC	$16.99	$17.04	$16.95	▼ 0.53%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Applications At Warp Speed

Taking A Look At Application Networking Solutions

by Sandra Kay Miller

• • •

DURING THE LAST FEW YEARS, analysts at Gartner and IDC have pegged the application networking market as one of the growing sectors in enterprise technologies with global sales of $1.4 billion in 2005 expected to grow to $7 billion by the end of this year.

Driving this growth are these solutions' abilities to secure applications and the associated data as well as optimize network traffic. Solutions with robust, automated auditing capabilities have also been welcomed for aiding in bringing compliance costs under control.

With the adoption of network-based applications and new technologies—such as service-oriented architecture, in which applications are connected across a network utilizing a common communications protocol—load balancing, QoS, and access control have also emerged as critical needs in large enterprises, data centers, and server farms.

Early point solutions in the application networking space were quickly snapped up by larger players. Citrix entered the application networking market with the $323 million acquisition of NetScaler, an appliance capable of accelerating networked applications by nearly 50% with an annual growth rate of 100%. Cisco joined the $135 million purchase of Reactivity, a high-performance XML gateway company, to beef up its Application Networking Services division.

There are also a number of best-of-breed solutions from which to choose. A10 Networks, Crescendo, and Radware all provide enterprise-class application networking functionality.

Cisco

Networking's big gun introduced AON (Application-Oriented Networking) as one of its advanced technologies in 2005. By adding application intelligence to existing network devices such as its routers and switches, Cisco forged ahead into delivering features, such as embedding application messaging visibility and security into existing hardware.

Buying Tips

For enterprises planning on implementing an application networking strategy, here are some tips to keep in mind.

- Classify the issue you are trying to solve. Do you want accelerated performance, better security, better provisioning, or a combination of features?

- Understand all the different facets of application networking, such as caching, compression, load balancing, route and protocol optimization, and QoS.

- Establish levels of service. Certain applications have priority over others on the network. Learn what individual applications' bottlenecks and vulnerabilities are.

- Deconstruct the application pathways. Know how information requests move across the network from start to finish.

- Perform a cost/benefit analysis. Face it, application networking isn't cheap, so be sure that prior to purchasing a solution, there will be a return on the investment.

- Create a benchmark prototype, so changes and challenges can be quickly identified.

"Relocating application services in the network is probably one of the most fundamental changes in IT that has occurred in my lifetime," said Cisco CEO John Chambers in a press release.

AON also changed the deployment, integration, and management of common applications by delivering them as network-based services. This gave organizations an option to relocate redundant functions into the network, such as application message-specific routing, monitoring and filtering, security policy enforcement, logging, and event capture. Additionally, AON improves application performance with load balancing, caching, and compression.

Industry analysts, such as Gartner's Roy Schulte, believe Cisco's entry into the application networking market will have a significant impact in the market space by allowing the network to differentiate between various application protocols for collaboration, QoS, security, auditing, and administration.

Charles Giancarlo, Cisco's chief development officer, foresees AON will reduce application development needed to deliver a more efficient centralized system for constantly changing business applications.

Citrix

Another technology heavyweight entering the application networking market is Citrix. Although the company plans to continue offering its recent acquisition of NetScaler as a standalone product, Citrix will also integrate its remote application access software into the NetScaler platform to provide Web-based applications and services at lower costs with increased performance.

Recently, Citrix released version 4.5 of its Presentation Server, which now provides centralized management, security, and control over the network of Windows-based applications using virtualization and application streaming.

By virtualizing applications and the information within the data center through an application hub, also new to this release, only screen displays, keyboard entry, and mouse movements generate network traffic. Application streaming centralizes the management of desktop applications. In conjunction, these two new additions to the Presentation Server provide increased control and security for application networking.

Presentation Server also provides load balancing and throttling, CPU utilization management, virtual memory optimization, and

support for multiple server groups scaling to environments with a thousand-plus servers.

Juniper Networks

Enterprises can decrease the time to access critical network applications regardless of the end user's location. The DX platforms from Juniper Networks incorporate application acceleration with security, increased server performance, bandwidth reduction, and WAN manageability. Based on a multifunction architecture, the DX series combines point solutions such as Layer 4-7 load balancers, Web accelerators, SSL terminators, and cache and proxy servers into a single appliance to deliver secure application networking in a distributed environment.

The DX platform is available in four models: DX 3200, DX 3280, DX 3600, and DX 3680. The 3200 models support 128 HTTP Proxy VIPS, 512 SLB VIPS, and 32 servers per application cluster, while the 3600 models increase to 256, 1,024, and 64, respectively. The differentiation in models is the number of SSL transactions and concurrent sessions each appliance can handle.

The 3200 models are 1U appliances with two Gigabit Ethernet ports, and the 3600 models take up 2U of rack space and offer

either four Gigabit Ethernet ports or two Gigabit Ethernet ports and two fiber ports.

A10

Point solution A10 Networks AX Series is an application acceleration switch that improves application availability up to eight times along with optimizing performance, increasing scalability, and securing application servers from crippling network-level attacks, such as DoS and protocol anomalies.

Using a multithreaded approach, the AX Series combines traffic acceleration ASIC, switching and routing ASIC, SSL acceleration ASIC with their proprietary ACOS (Advance Core Operating System) on a 2U appliance.

The AX Series is composed of four different models—Enterprise AX 2100 and AX 2200, Enterprise/ISP AX 3100 and High Performance Enterprise/ISP AX 3200, each with increasing performance and availability.

Crescendo

The multigigabit Maestro Platform from Crescendo Networks is a purpose-built appliance for application acceleration and optimization through TCP termination, compression, SSL acceleration, and server load balancing. Organizations can increase their site scalability by as much as 200% along with end-user response time while reducing bandwidth consumption.

Designed to work with any HTTP-based application, Crescendo's appliance drops onto the network on the same segment as application and Web servers, which require no changes to work along with Maestro.

Crescendo offers four different hardware configurations for Maestro: CN-5020E, CN-5080E, CN-5504E, and CN-5510E. The differential factor is the number of Gigabit Ethernet ports and fiber ports.

Radware

ERP, CRM, databases, email, VoIP, and terminal services have all become critical business tools. In order to maintain availability, performance, and security, Radware created AppDirector, a high-availability appliance for quickly and efficiently rolling out Web-based and networked IP applications.

Built on Radware's ASIC-based APSolute OS that enables Layer 4-7 application acceleration, AppDirector optimizes server utilization to increase performance for both commercial and homegrown applications. Features include distributed traffic management, load balancing, stateful persistence, bandwidth management and traffic shaping, SSL offloading, and comprehensive device, server, and application path management.

AppDirector helps maintain high availability through real-time application health monitoring, distributed redirection in the event of a localized failure, and active-

active or active-passive redundancy on an appliance with redundant power supplies.

Additionally, AppDirector offers application-level protection against DoS and other network attacks through integrated intrusion prevention. ⬛

Zetera Launches New NBOD Line

Benefits Of SAN & Simplicity Of DAS

WHILE THE BENEFITS of using a SAN for data storage are easily recognized, the costs and administrative intricacies can be overwhelming if not unattainable for many smaller businesses. Consequently, the use of DAS by SMEs remains prevalent. With an eye at changing this equation, Zetera expanded its product lineup with two new networked disk solutions to address the data storage needs of SMEs.

Leveraging an NBOD methodology while offering many of the same features common to both DAS and iSCSI SANs, Zetera's lat-est storage solutions are available in two configurations: a 4-bay desktop version (Model 410 Series) and the 1U rackmount configuration (Model 1100 Series). The Zetera NBOD arrays can be allocated across individual or multiple servers without the management overhead of traditional SAN solutions. Volumes created on the Zetera devices appear and behave just like traditional internally mounted disks or arrays. Extra capacity can be allocated to a given host as necessary.

The 410 and 1100 are based on Zetera's Z-SAN architecture. Using IP (Internetworking Protocol) rather than hardware as the storage fabric, Z-SAN allows volumes to be shared, spanned, striped, or mirrored across any disks regardless their physical location or enclosure. Storage using IP provides for the direct mapping of IP addresses to each storage element without the need for a dedicated controller. According to Zetera, Z-SAN technology offers an economic advantage with cost-effective, mass-produced components resulting in no special hardware or training requirements.

Each device can accommodate up to four hot-swappable SATA 1 or SATA 2 disks operating at up to 7200rpm. Both offer up to 4TB capacity per enclosure. Network connectivity is provided via a Gigabit Ethernet (1000BASE-T) port. Both come with Zetera's Personal Storage Manager application software for Windows and a one-year limited hardware warranty.

Zetera NBOD 410 & 1100 Series

410: $2,199; 1100: $2,699

Lets SMEs bridge the gap between SAN and DAS

(949) 862-0022

www.Processor.com/NBOD-1100

zetera

AirShield Security Suite 2.0

Meru's Enhanced Mobility With Wireless LAN Security Package

UNLIKE TRADITIONAL WLAN OFFERINGS, which only provide basic security, Meru Networks' new AirShield Security Suite 2.0 software delivers application-aware security that allows administrators to configure security policies for specific users, applications, and locations. This results in enhanced mobility without compromising security.

Typical WLAN security systems, for example, are unable to simultaneously scan and service voice traffic because the task of scanning puts these APs into a mode that can only scan but not service clients. The scanning capability of the APs, therefore, must be put on temporary hold when some applications are in use, resulting in a potential lapse of security. The adoption of emerging applications, such as wireless VoIP, places greater demands on the wireless security infrastructure.

"AirShield Security Suite 2.0 is particularly attractive to customers who have mission-critical real-time applications such as voice and video because these applications cannot tolerate that kind of transmission interruption," says Keyur Shah, senior product manager at Meru. "It takes advantage of Meru's core technology, Air Traffic Control, to completely control over-the-air activities and coordinate multiple functions at once."

This is important in light of increasing mobility of the workplace, the growing availability of wireless devices, and the rising tide of security threats affecting radio frequency technologies. This includes breaches of security due to misconfigured access points or employees bringing in unauthorized clients or access points, as well as malicious attacks such as rogue APs or surreptitious eavesdropping.

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DATA CENTER SERVICES   APRIL 6, 2007

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Migratory Patterns

Switching To Vista Can Be Easier With The Right Tools

by Elizabeth Millard

• • •

THERE ARE MANY ASPECTS of IT and data center management that are inevitable: The system will go down right when the CEO needs it; an intern will ignore the "no beverages by the keyboard" rule; and no matter how spiffy an application is today, it'll have to be upgraded eventually.

But when that new system is Windows Vista, the switch isn't a simple upgrade, and that can be anything but predictable.

Fortunately, the demand for a streamlined method for determining an enterprise's readiness for Vista is likely to drive some application developers to create tools that make migration a less daunting project. So far, Microsoft seems to be leading the pack with a recent release of several new tools for deployment, and best of all, the price is right. Here's what can be downloaded free from the company's site (www.microsoft.com).

Microsoft Solution Accelerator For BDD 2007

When considering which tools might help with Vista migration, it's likely that many small to midsized enterprises will turn to the developer that created the system in the first place. Microsoft has stepped up to the challenge by releasing several deployment tools, and BDD (Business Desktop Deployment) is worth some serious study.

The accelerator is a set of guidelines and tools that SMEs can use to deploy both Vista and Office 2007 for desktops. Includ-ed in the bundle are tools focusing on user-state migration, remote deployment, and integration with other Microsoft applications. This particular pack also acts as a toolbox for other migration tools, bringing them together in a consolidated way so that IT managers can use the tools in conjunction with each other.

Windows Vista Hardware Assessment 1.0

One of the major challenges with deploying Vista will likely be whether an enterprise's existing PCs are able to be upgraded. Many companies have desktop machines that are different ages, even if they all run the same system. The hardware assessment tool inventories all PCs on a network without installing any software agents—a tactic that's a major time saver compared to an application-based inventory tool. Comprehensive reports are generated after the assessment, detailing each computer's compatibility with Vista and giving upgrade recommendations.

The wizard can inventory and scan computers that are running an operating system that supports Windows Management Instrumentation, which includes Windows XP Professional (with SP2), Windows Server 2003, and Windows 2000 Professional or Server. In addition to looking at system needs, the tool also examines device drivers and advises users as to which manufacturers should be contacted for new drivers.

Some analysts have noted that the release of this particular migration tool could actually delay deployment because it will highlight the types of hardware upgrades needed for Vista. Although that might not fit with Microsoft's plans to get enterprises on Vista quickly, it is good news for companies

> ## In addition to making sure that hardware is up to snuff, SMEs will have to ensure that their applications are compatible with Vista.

because it means that a tool such as hardware assessment can catch a number of issues before Vista is employed.

Microsoft ACT 5.0

In addition to making sure that hardware is up to snuff, SMEs will have to ensure that their applications are compatible with Vista. Some homegrown applications, or those being created by independent software vendors, can benefit from this tool because it helps to resolve potential application compatibility problems.

In addition to recommending ways to resolve conflicts, ACT (Application Compatibility Toolkit) 5.0 also determines whether any issues might crop up during the application's entire life cycle. An SME can analyze a portfolio of applications, evaluate the impact of an operating system update, and centrally manage configuration settings. Also included are tools for developers to test setup packages, Web applications, and Web sites.

In order to keep on top of this changing area, Microsoft has created the ACT Community, an online community section on its site, so users can get frequent updates and test results from both Microsoft and other software companies.

USMT 3.0

Once an SME has done all of its hardware and software assessments and is ready to make the switch of at least some machines to Vista, USMT (User State Migration Tool) provides a way to migrate user files and settings during deployments of both Windows XP and Vista. The tool is often used to perform unattended migrations, especially for multiple users, and provides encryption and compression, as well.

The migration process is controlled by the XML rules, but IT can modify the files and rules and even the logic that's built into the tool. This allows for much more customization, so the migration can be tailored for a particular enterprise environment.

Windows Easy Transfer

Most enterprises will opt for large-scale migrations that switch several users at once, but for those machines that might require individual care—at a telecommuter's house, for example—Windows Easy Transfer is true to its name and can even be employed by users themselves.

The tool moves files and settings from a PC running Win2000/XP/Vista to one running Vista. Everything from user accounts and files to photos and music can be transferred, as well as Internet settings, email messages, contact lists, and application settings. Microsoft has created a few different ways for transfer, such as connecting two machines through a special USB cable that's specifically designed to work with the transfer tool. Or settings and files can shuttle though a network using shared folders. ⊡

Additional Migration Tools

In addition to Business Desktop Deployment, application compatibility, and its hardware assessment tool, Microsoft recently released three other tools for businesses to ease migration.

Volume Activation Management Tool. Enables IT managers to automate and centrally manage the volume activation process by using the Multiple Activation Key.

Key Management Service for Windows Server 2003. Allows enterprises to host a local service within their environment that's used during the Vista activation without having to send information to Microsoft.

Virtual PC 2007. Lets SMEs migrate computers to Vista while keeping a previous Windows environment available. This environment could be especially helpful for companies that have a number of legacy systems or custom applications that aren't suitable to be on Vista.

The Verdict On Vista

make sure everything's going to play nice," says Haque, noting that Vista is "not really proven in a production environment yet."

Vista's interface, dubbed Aero, also needs a hefty bit of hardware to run optimally, leading many firms to link their Vista upgrades to existing hardware refresh plans, thus avoiding the time and expense of installing more RAM or new graphics cards on current machines.

And strangely enough, Vista's chief hurdle to widespread acceptance may be Windows XP. A paradox? Perhaps. But with five years and two service packs under its belt, XP has become a stable, well-known, proven OS. "The majority of Info-Tech clients that we talk to are finding that right now, XP is either meeting or exceeding their requirements," says Haque.

Early Adopters

But just because some companies have been cautious with office-wide deployments does not mean that Vista has gone ignored. "Internally, we've been using it for at least six months now, since Release Candidate 1," says Tim Medora, senior vice president of Net Fusion (www.netfusioncorporation.com), a Phoenix-based designer of custom business applications.

What's Medora's verdict on Vista? "I'm still here," he jokes. "It didn't blow up terribly, didn't make me roll back to XP."

Indeed, Medora and Net Fusion's CEO, Jim Duckett, see much to like in Microsoft's new product. "We're putting it through its paces, essentially," says Duckett. Among their favorite Vista features is a well-conceived search function that sniffs through Office docs, emails, and nearly every other type of data with clean, useful results. (According to Medora, Vista's

> **Vista's interface, dubbed Aero, needs a hefty bit of hardware to run optimally, leading many firms to link their Vista upgrades to existing hardware refresh plans, avoiding the time and expense of upgrading current machines.**

search feature even turns up better results for Outlook items than Outlook's internal search function.)

And while potential hardware problems worry most would-be Vista owners, Net Fusion's Vista machines had no trouble playing nicely with the firm's existing hardware, including its Wi-Fi network.

Minor Wrinkles?

Info-Tech's Haque notes that some of Vista's features—including the features most sought after by IT managers—might not be so welcome to end users. Among these is security. By default, Vista runs a much tighter ship than Windows XP, giving the average user less freedom to alter his system in ways that can introduce malware.

Net Fusion's Medora agrees. "With regards to security, yes, there are some things that make it inconvenient, in that it will check and prompt you repeatedly," he says. But for IT and data center managers, a little inconvenience is a small price to pay for protection. "I haven't had any problems with viruses, corruption, or anything like that," notes Medora.

Of course, with all of Vista's fanfare, it's easy to forget that Microsoft released a new version of Office, too—an upgrade that won't demand the added hardware, time, and expense of a full-scale Vista deployment.

"Frankly, I can't say enough nice things about Office 2007," says Medora, who credits its rich feature set, clear interface, and convenient options (such as the capacity to export documents to PDF) with its success. Microsoft's new version of SharePoint, which lets teams share calendars, documents, and other data, is also a winner, he adds.

The bottom line? Vista has yet to conquer the enterprise space, and full-scale deployments may stretch into 2008. But a slow start won't determine what's bound to be a long race for Microsoft's latest contender. **P**

Vista's Hardware Demands

Vista has already earned a rep as a hardware-hungry OS. And much of its hardware needs depend on what type of Vista you plan to run.

A pared-down, nuts-and-bolts version of Vista—one without its sleek, RAM-grabbing Aero interface—can run on most of today's Windows XP SP2 machines. Microsoft calls these machines Windows Vista Capable PCs, which include:

• An 800MHz processor
• 512MB of RAM
• A GPU with DirectX 9 that can support SVGA at 800 x 600 pixels

• A 20GB hard drive with 15GB of free space
• A CD-ROM drive

In contrast, a Windows Vista Premium Ready PC includes:

• A 1GHz processor
• 1GB of RAM
• A GPU with 128MB of graphics memory (less if the GPU shares system RAM) that supports DirectX 9, a WDDM driver, Pixel Shader 2.0, and 32 bits per pixel
• A 40GB hard drive with 15GB of free space
• A DVD-ROM drive

One-Time Password Technology

domain of organized crime," says Hamid. So, he adds, OTP technology is a good way for organizations to provide stronger user authentication and prevent identity theft.

Bruce Schneier, founder and chief technology officer for BT Counterpane (www.counterpane.com), a provider of managed security services and security consulting, says one-time password technology makes a lot of sense for providing employee access into corporate networks. But many companies remain mired in old security technologies that no longer work well with today's sophisticated attack methods. "I am continually amazed by the number of businesses that still rely on password-only authentication," says Schneier.

How OTP Works

As the name implies, OTP relies on the generation of unique, one-time passwords to provide connection security. OTPs, as Hamid points out, are in theory not reusable, so if an attacker manages to obtain one, it won't do him or her any good.

Schneier says OTP's main advantage is that it's immune from password sniffing attacks. "If someone manages to get your password, either by intercepting the communication or watching over your shoulder, it doesn't give them access to your stuff," he says.

There are a variety of ways to deliver OTP security functionality; these include time-based, counter-based, challenge-based, and mutual authentication, says Hamid.

With time-based OTP, for example, a token carried by the user generates a unique numeric sequence every minute or so, and the user uses this numeric sequence to provide authentication. According to an RSA Security whitepaper, the token carried by the user and the authentication server share a secret credential, which an algorithm uses to generate a unique, one-time password. RSA Security's SecurID implementation also provides users with a PIN, which is entered into a system in combination with the OTP to supply two-factor authentication and gain entry into a system, such as a corporate network.

Other approaches use an algorithm to generate unique passwords. For example, in challenge-based OTP, a user has to input a challenge into the system, which is then used to generate a new, unique password that can be used for authentication. Or, in other cases, a new password is mathematically generated using a previous password as a "seed." (A challenge is a way to "convince" a verifier that the user trying to gain entry into a system is a legitimate user. The user trying to log in to a system is challenged to provide the right credentials, and the response is either correct or not.)

Challenges To OTP

Is OTP the panacea to solve all security problems? Of course not. Even though OTP is a much stronger security technology than simple username/password authentication, the technology is not without its shortcomings.

BT Counterpane's Schneier says one OTP drawback is that it's often used in instances when authentication is not the problem. For example, Schneier explains in a recent "Crypto-Gram Newsletter," the two-factor authentication provided by OTP solutions doesn't help against the types of newer, active attacks, such as phishing and Trojan horses. According to Schneier, two-factor authentication solves the security problems posed by yesterday's passive threats, such as eavesdropping and password-guessing, but does little to counteract today's more sophisticated threats, which are predicated on perpetrating fraud through impersonation.

MXI Security's Hamid says OTP may require additional devices for institutions to deploy and manage. Also, OTP has the potential to inconvenience users, who now have to enter the numeric sequence displayed by their token to gain access onto, for example, a corporate network. So users must carry their OTP tokens or devices with them at all times or risk losing their access.

"OTPs by themselves do not solve the identity theft problem," says Hamid. For example, he adds, OTPs are vulnerable to "man in the middle" attacks, so multifaceted authentication and data protection solutions are needed to defend users and data against sophisticated attacks. According to Hamid, MXI Security's technology goes beyond OTP by providing up to four-factor authentication based on device ownership, password access to the device, biometric verification of device owner, and encrypted RSA SecurID seed token store.

MXI's Stealth MXP line of portable security devices provides various methods for securing data carried on the devices and for authenticating users. For example, the Stealth MXP portable USB drive provides three-factor authentication using biometrics, a password, and a digital key. Other devices in the product line, such as the Stealth MXP Passport or the Stealth MXP Bio Token, provide various combinations of security technologies, including password authentication, biometric authentication, and two-factor authentication based on biometrics and password.

Be Vigilant

Data thieves are an industrious lot, constantly working to improve the methods they use to separate their victims from their identities, their money, and their data. As long as technology continues to be an integral part of everyone's business and personal lives, the cat-and-mouse game between data thieves and data owners will continue. Security experts and administrators cannot afford to rest on their laurels because as soon as they build a new mousetrap, along comes a better mouse ready to run circles around technological defenses. For better or worse, vigilance is the name of the game. **P**

Products Using One-Time Password Technology

Product	Description	Web Site
ActivIdentity Strong Authentication Solutions	Multifactor authentication via smartcards, USB tokens, one-time password tokens, soft tokens, and biometrics	www.activeidentity.com
MXI Security Stealth MXP	A line of portable devices designed to provide multiple levels of authentication and data protection	www.Processor.com/MXI
RSA Security SecurID	A well-known and widely used technology that uses time-based OTP to generate unique passwords	www.rsasecurity.com
VeriSign Unified Authentication Tokens	A variety of tokens that provide both OTP functionality and storage of digital certificates	www.Processor.com/Veri

NAC Technologies Join Forces

How Choices Are Flooding The Realm Of Network Access Control

by Christian Perry

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FOR MANY ENTERPRISES, controlling the many and varied clients that access their networks is akin to protecting a flock from wolves in sheep's clothing. Determining which computers are secure enough to safely connect at any given time can require resources and knowledge far beyond what's found in the average small to midsized enterprise.

Yet, companies such as Microsoft (www.microsoft.com) and Cisco Systems are redefining the boundaries of network access with innovations such as NAP (Network Access Protection) and NAC (Network Access Control), respectively. These host admission-control technologies allow clients to directly relate their security status to servers, which can then permit or deny the clients access to the network.

"With spiraling costs due to data loss and more attacks targeting employee data, enterprises need assurance that managed and unmanaged devices comply with security policies for firewalls, OS patches, antivirus, and spyware protection," says Dan Clark, vice president of marketing at Lockdown Networks. "Enterprises are also facing the challenge of balancing security with the increasing pressure to provide easy network access for all users, as well as company guests and contractors that require access to network resources."

NAP Arrives

This challenge is being met head-on by network access technologies, which are creating plenty of buzz in the networking world. The release of Microsoft's Windows Vista has particularly boosted their exposure, thanks to the inclusion of NAP in both Vista and the upcoming Windows Server Longhorn.

With NAP, administrators can infuse a mix of policy validation and network access limitation to enact control over network access and choose to temporarily limit access to clients that don't meet security guidelines. Certain NAP configurations can allow the restricted network to contain and apply resources to blocked clients, so they comply with those requirements, which can save both users and administrators time and prevent lost productivity.

"The benefit of Microsoft NAP vs. other access control technologies is the pervasiveness of the Microsoft platform, once the adoption of new versions of Windows that include the NAP components have penetrated the market," says Amrit Williams, chief technology officer of BigFix (www.bigfix.com). "Microsoft will provide a framework that allows the security ecosystem to support policy checking and to constrain the endpoint if the machine is found to be noncompliant."

Although some enterprises are already familiar with and use NAC, Williams explains that the introduction of NAP will be a positive for companies looking to implement a pervasive access control program. NAP will also be able to augment NAC deployments—most of which have been narrowly scoped to focus on limited segments of the user population, such as people who use VPNs to access network resources, he says.

Yet for all of the promise of NAP, some experts say the technology isn't likely to have a significant impact in network access environments right away. "The introduction of NAP will not make an immediate splash on the market because it's a technology that is specific to Microsoft's Vista operating system—and the server side is not yet available," says Devin Anderson, security business line manager at LANDesk.

However, as companies eventually integrate the Vista platform, Anderson says he expects IT administrators to begin choosing between NAP and NAC alternatives.

No Wait For NAC

For companies new to the network access arena and intrigued by the buzz surrounding NAP, plenty of NAC options are available to satisfy security needs until the choice of NAP and NAC ultimately arrives. NAC technologies already have found homes in enterprises that recognize the weaknesses inherent in traditional, yet outdated, network security strategies.

NAC products operate much on the same principle as NAP, providing authentication services that allow or deny access to

Security Status

network resources. Hardware and software offerings provide flexible options for enterprises with varied needs, including tools such as zero-day threat prevention, dynamic policy enforcement, network intelligence, and others.

"The realization of the insider threat, as well as unmanaged services logging on to our network, is driving the NAC market," says Alan Shimel, chief strategy officer at StillSecure. "For too long, we have concentrated on the perimeter of the network. The threat is inside and needs to be dealt with. This is the reason for NAC and data leakage technologies being so popular."

StillSecure's Safe Access, available as software or as a preconfigured hardware appliance, provides network access control through a plethora of features, including preconnect testing, post-connect monitoring, identity-based access controls, and flexible endpoint testing, enforcement, and remediation. Naturally, NAC products are available from Cisco, which led the industry initiative to create NAC, as well as multiple other companies. (See the "A NAC For Security" sidebar for more information.)

Striving For Harmony

Unlike many standards and platforms, NAP and NAC will actually work in tandem, leaving companies to choose between either of the technologies or an interoperable deployment of both. At The Security Standard conference last year, Microsoft and Cisco unveiled the integrated architecture, featuring NAP client APIs that serve as a single programmable interface for both NAC and NAP reporting.

Lockdown's Clark describes a scenario in which both technologies can be deployed: "In the university environment, there is a constant stream of devices joining the network, which the university does not manage. Many are not NAP-capable. Yet the school must ensure they're protected against malware and exploits, so schools can deploy NAP to protect their managed assets that are NAP-enabled, such as administrative systems or school-owned faculty computers, while using Lockdown NAC to deal with non-NAP student and guest devices in the residence halls or on campus."

However, it bears mentioning that the paths of these technologies isn't exactly well-defined, and companies looking to implement both should tread carefully into the future before banking on a full-fledged mix. BigFix's Williams notes that it's unclear how well Microsoft and Cisco will be able to coordinate NAP and NAC, given their different corporate cultures, development processes, and domain expertise—as well as the potential competitive environment at hand.

In any case, enterprises developing a clear implementation plan before using any of these technologies will be on the right path. "Ultimately, the success or failure of any NAP, NAC, or NAC/NAP deployment will rest upon the ability to deploy policies that reflect the enterprise's true objectives, and to do so in a way that maximizes network uptime and ensures a smooth end-user experience," Clark says. ▣

A NAC For Security

For enterprises that are seeking access control and aren't willing to wait for the server version of Microsoft's Network Access Protection, here's a sampling of companies and their Network Access Control offerings.

Company	Products	URL
BigFix	Network Access Control	www.bigfix.com
Cisco Systems	NAC Appliance and NAC Framework	www.Processor.com/CiscoSystems
ConSentry Networks	LANShield	www.Processor.com/ConSentryNet
Enterasys	Sentinel	www.enterasys.com
ForeScout Technologies	CounterACT	www.Processor.com/FSCT
Juniper Networks	Unified Access Control	www.Processor.com/JuniperNet
LANDesk	LANDesk Security Suite	www.Processor.com/LANDeskSoft
Lockdown Networks	LockDown Enforcer	www.Processor.com/Lockdown
Sophos	Sophos NAC	www.Processor.com/Sophos1
StillSecure	Safe Access	www.Processor.com/StillSecure
Symantec	Network Access Control	www.Processor.com/SymantecCorp
Vernier Networks	EdgeWall	www.Processor.com/VernierNet

Vista Deployment

Deploying Windows In SMEs Is Easier Than Ever

by John Brandon

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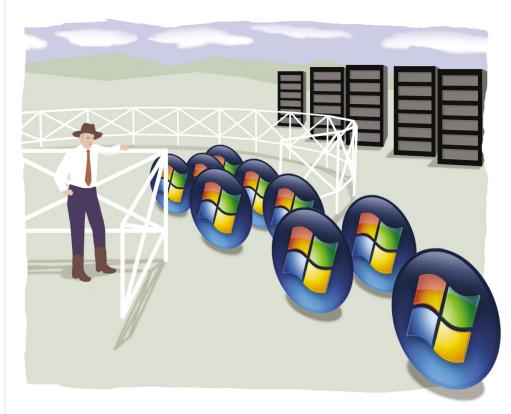
SAY THE PHRASE "Windows XP deployment" to just about any network admin, and you might get a chuckle or a mildly sarcastic, eye-rolling gaze. The reason: Windows XP ended up being a mish-mash of service updates, driver roll-outs, and security patches. There were many long, sustained periods of incompatibility during the past few years, and creating a standard desktop—which is a distributable image of the operating system and related software, drivers, and patches—was always a difficult process, even for those smaller companies fortunate enough to have an enterprise-caliber distribution system.

With Windows Vista (www.microsoft .com), it would almost seem that small and medium-sized enterprises will experience some déjà vu with the new operating system roll-out. With multiple versions for business users and creative producers alike, and at various pricing strategies, Windows Vista could potentially turn into another deployment nightmare. Yet, Microsoft seems to acknowledge the fact that Windows XP was not always the most deployable operating system for business and has made great strides in its deployment strategy. These five tips can help you make the upgrade in your business easier and less painful.

Use The Microsoft Desktop Deployment Portal

Microsoft offers a comprehensive online portal to help companies deploy Windows Vista. (See www.microsoft.com/technet

that translates into is that departments can deploy Vista easier in terms of technology and usability."

Many of the links are good reminders for admins who need to keep track of all the steps involved in deployment, such as a hardware inventory list, test and lab environment creation, customized packages for applications, OS imaging, and a hardened desktop security environment as part of the deployment strategy. Yet, the portal goes a step further with software tools that help automate these functions

/desktopdeployment/default.mspx.) It's an extensive information and software download site (most, if not all, of the software to aid in deployment is free) that provides links to helpful deployment articles. "Vista deployment is significantly easier from a tools and solutions perspective," says Manu Namboodiri, the senior product manager for Windows client at Microsoft. "What

> One key aspect to deployment is making sure the end users understand the key milestones in the deployment, such as when the deployment will occur and how it will change the user's hardware and software use.

and include such subtleties as email reminders to groups of users about preparing for the coming deployment.

Use Windows Vista Nondestructive Imaging

Some admins shy away from imaging an operating system when they know it will be deployed on a wide variety of systems,

such as laptops, tablet PCs, subnotebooks, desktops, and workstation computers. Too many companies have experienced a dramatically unsuccessful deployment because users are not prepared for the installation over Microsoft SMS (System Management Server) or Tivoli (www.ibm.com). End

users lose data when the new operating system replaces the old. Microsoft Vista uses a new form of nondestructive imaging that creates a C: directory called MiniNT on the local hard disk. Vista is installed entirely separate from the current operating system, so all of the original files remain intact and are not replaced by the deployment process.

This has two main benefits. One, Vista is installed cleanly on the hard disk without a destructive data replacement process, acting more like a network-attached storage installation than a local install. Two, network admins gain more control over the deployment. In SMEs, where a NAS might not be available to deploy Vista, the nondestructive imaging process is clearly the best approach. It also means that the OS and related device drivers, software updates, and applications can be deployed through the same folder.

Customize The Deployment With BDD

The Microsoft BDD (Business Desktop Deployment) software, available free at www.microsoft.com/technet/desktopde ployment, is a customizable tool for businesses to deploy Vista to a variety of departments without having to create multiple images. The new HAL (Hardware Abstraction Layer) and language neutrality features

help you create fewer images that work on standard hardware across your entire company. The BDD also helps you manage different images for departments with different needs. (For more information on BDD and other products from Microsoft, see "Migratory Patterns" on page 10 of this issue.)

"What we have found is that desktop deployment sometimes fails not because of the technology but because there is not enough guidance and best practices," says Namboodiri. "[Microsoft] has not always done the best job of providing good guidance for deployments, but BDD gives the methodology that aids in that strategy."

Develop A Comprehensive Training Plan

One key aspect to deployment is making sure the end users understand the key milestones in the deployment, such as when the deployment will occur and how it will change the user's hardware and software use. Namboodiri says that deployment is partly a technology change and partly a training initiative. He emphasizes communication as the differentiator between a successful deployment and one that causes frustration with end users. With BDD, he recommends sending notices when the deployment is six months away, a few months away, one month away, and just weeks or days away so that users know what is coming and when and can plan accordingly.

Windows Vista itself is a highly intuitive operating system, but some areas will require fresh training, especially related to a new process for wireless networking, handling desktop security through the Windows Defender, and—if it is deployed simultaneously—a new effort in training users to learn Microsoft Office 2007.

Use The Light-Touch Environment For Deployment

Microsoft offers the BDD as a light-touch environment, which means the process of configuring a deployment—including imaging and security—won't require days or weeks of training. The BDD and light-touch environment uses wizards and scripts to simplify deployment. "Small and medium-sized companies often do not have an IT staff focused just on deployment, and they are often IT generalists instead," says Namboodiri. "So, the light-touch environment is for admins in those companies to take advantage of a system that is similar to an enterprise-class deployment tool, such as SMS."

Overall, Vista deployment has much stronger support through a Web portal and software available to ease the migration. And tools such as BDD can continue to help admins with deployment of future security patches and software updates. Unlike previous deployment scenarios, all of the software to help companies move to Vista is located at one Web site, which can take much of the burden out of the deployment equation. ▨

Steelcape Secures & Accelerates Data

New Solution Effectively Sends Data Without Opening Ports In The Firewall

COMPANIES SPEND BILLIONS to deter hackers. Current security offerings rely on encryption, but Steelcape believes in a more powerful approach that rejects the notion that ports must be opened and stay open. The Steelcape solution allows transactions to be completed without creating a hole in a user's firewall, and without the need for ongoing involvement of a central server.

Steelcape has developed an alternative TCP/IP communication method. This results in secure data being able to traverse the firewall unhindered. Steelcape alters IP

packets, enabling them to pass through firewalls unchallenged and unmodified. Steelcape's blend of patented computing algorithms and packet manipulation can be used to replace elements of the existing TCP/IP protocol stack or supplement the existing TCP/IP protocol stack. It is an ideal VPN or VLAN alternative and is compatible with TCP/IP version 4 and 6.

Steelcape concentrates security at the data level, and our easy-to-implement software agent deployment provides faster and more secure communication between computers.

With Steelcape, you benefit from:

• Elimination of the need to open firewall ports. You'll see a greatly reduced risk of internal and external hacking and reduced cost of security solutions.

• Direct communication between two computers with limited overhead. This means reduced bandwidth requirements by up to 25%, reduced lag time by 10%, reduced number of servers by up to 25%, and a reduced support staff.

• Bypassing of the transport layer, resulting in a decentralized enterprise architecture.

The Steelcape solution can be deployed from either a hardware appliance or software-based agent. Typical implementations are to deploy a point-to-point implementation that takes minutes to show results. The Steelcape Enterprise Manager provides reporting and managing of the digital signatures and encryption rules.

Complete Intel Server Systems

Save Time & Reduce Operation Costs
With A Dual-Core Intel Xeon Processor In Your Servers Direct System

SERVERS DIRECT is now offering two Intel-based products designed for the small to midsized enterprise: the SDR-6015T-TB 1U Data Center Clustering Server and the Intel Server System SR1530AH.

1U Data Center Clustering Server

The SDR-6015T-TB uses Servers Direct 1U Twin, an innovative 1U rackmount system designed to increase computing density while reducing cost, energy, and space requirements. With two systems (or two nodes) within a 1U space, the 1U Twin can support up to 16 processor cores (two systems both housing dual quad-core Xeon 5300 Clovertown CPUs).

With the SDR-6015T-TB, you get:
- Two nodes in one 1U system, saving chassis, power supply, and rack costs

- Double the density and computing power, saving IT space rental costs
- Higher power utilization, which increases power supply efficiency and saves energy costs

The SDR-6015T-TB clustering server supports up to 16 processor cores.

- Reduced number of power cables and power strips for easy cabling, better airflow, and reduced cabling costs
- The ability to operate and maintain two systems in one physical space, saving maintenance and management costs

- A system that's perfect for HPC computing cluster, data center or data farm, search engine nodes, and high-availability applications

Server System SR1530AH

Small and midsized enterprises often find themselves cramped for space. That's where products such as Servers Direct's Intel Server System SR1530AH

The SR1530AH is ideal when space is at a premium.

come in. The Intel Server System is an extremely short (20-inch) 1U rack-optimized system.

It's designed with great performance and reliability in mind. Features such as Intel Virtualization Technology and Intel Extended Memory 64 Technology support the latest software available, while dual-channel DDR-2 with ECC support and Intel Matrix Storage Technology ensure servers automatically detect and correct

problems in memory, safeguarding your important data.

The SR1530AH comes with a multicore Intel Xeon processor based on Intel Core microarchitecture for enhanced performance and energy and power efficiency; an Intel 3000 server chipset for enterprise-class performance and reliability; dual-memory channel and four DIMM slots for improved system uptime; and dual Gigabit Ethernet connections for ample bandwidth.

Full Product Lineup

In addition to offering these two Intel-based products, Servers Direct offers a complete lineup of Intel-based servers, server peripherals, and components. All Servers Direct systems are manufactured under an ISO 9001:2000-certified process.

Features Compared

SDR-6015T-TB
- Dual-processor quad and dual-core Intel 64-bit Xeon support
- Up to 32GB DDR2 667 & 533 SDRAM fully buffered DIMM (FB-DIMM)
- 2x Intel (ESB2/Gilgal) 82563EB dual-port Gigabit Ethernet controller
- 2x hotswap SATA drive bays
- 900/980W high-efficiency power supply

SDR-6015T-TB
- Multicore Intel Xeon processor based on Intel Core microarchitecture
- Intel 3000 server chipset
- Dual memory-channel, four DIMM slots for DDR2 533/667MHz unbuffered ECC/non-ECC (8GB max) automatically corrects single-bit errors
- Dual Gigabit Ethernet connections provide ample network bandwidth with options for separate subnets and redundant links

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Servers Direct SDR-6015T-TB 1U Data Center Clustering Server

Starts at $2,150

Fully customizable up to two-node system in a 1U form factor

(877) 727-7887

www.Processor.com/1UTwin

Servers Direct Intel Server System SR1530AH

$489.99

An extremely short, 1U rack-optimized system for cramped spaces

(877) 727-7887

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servers ▶ DIRECT™

SECURITY

Control Who & What Is On Your Network

Lockdown Enforcer Delivers Powerful & Precise Network Access Control

LOCKDOWN NETWORKS' Lockdown Enforcer puts IT back in control of the network by automating access policies to keep the network safe from at-risk devices and unauthorized users. With Enforcer, all devices on the network stay in continuous compliance with security policies and access to networks is smoothly automated, even for guest users.

Lockdown Enforcer supports all networked devices and is an overlay to existing networks. And as an out-of-band appliance, it won't slow your network down and will scale to support next-generation networks, even 100G.

Powerful Policy Engine

Lockdown Enforcer's Precision Policy Engine integrates identity, device health, location, and other factors to determine which network users should be on the network and to assist in device remediation when compliance problems occur. Authentication and other policy inputs place devices into production, guest, and private quarantine VLANs. If a device is quarantined for "health" violations, a Rich Quarantine Environment enables end users to self-remediate their systems without help-desk support.

A new feature for Lockdown Enforcer is the ability to directly input syslog notifications into policy actions, enabling any IPS, IDS, NBA, or other security system to trigger policy actions, from quarantine to notification.

Enterprise Features

Lockdown Enforcer integrates with any managed switch and most popular WAPs. No hardware or software upgrades are required. It communicates with managed Layer 2 switches via SNMP and a command-line interface and provides the same coverage for wireless access points.

Support for multiple authentication mechanisms. Enforcer supports 802.1x port-based authentication, Windows authentication, RADIUS, and Web logon ensuring the most appropriate type is applied to users and devices.

Agent or agentless device assessment. Enforcer audits devices for virus and spyware protection, personal firewalls, OS versions, patches, DHCP servers, unauthorized services, and more. Enforcer uses agentless scans to ensure minimal impact on client devices.

Integrated authentication server. Enforcer works with existing RADIUS servers and also includes a standalone authentication capability using a built-in RADIUS server.

Integrates with Directory Services. Enforcer's native LDAP support ensures compatibility with popular enterprise directory services, letting you utilize user and group membership data to create policies at the group or individual level.

High availability. Lockdown Enforcer is available in a 2U form factor, with redundant processors, disks, and power supplies. Both the 1U and 2U versions of appliance can operate in redundant pairs for maximum network availability.

Automatic access. Enforcer dynamically assigns users to production, guest, or quarantine VLANs based on policy. Lockdown uses private VLANs to ensure quarantined devices are isolated from one another.

Configurable audits. Enforcer allows audits to be designed to suit specific requirements. In addition to preset scans, you have control over audit depth and schedules.

Syslog integration. Allows IDS, IPS, NBA, or other systems to directly trigger policy actions.

Aggregates and baselines vulnerability data. Enforcer combines real-time and historical audit results to increase accuracy of assessment and establishes baselines to create effective, actionable data, avoiding unneeded quarantine events.

Centralized reporting. Enforcer generates real-time and historical reports available in a number of exportable formats. Consolidated data can be presented using predefined or custom formats to support enterprise-wide management, operations, and compliance needs.

Workflow and notification. Lockdown NAC supports two-way integration with help desk and enterprise management software and integrates with workflow ticketing systems to accelerate remediation. Tickets are automatically assigned based on policy and output is generated via email, Syslog entries, or SNMP traps.

Backup/restore. Configuration and audit/enforcement data can be uploaded or downloaded to any workstation with a Web browser. Lockdown includes a tool to automatically generate backup files.

Lockdown Enforcer

All-in-one NAC appliance that ensures all networked devices adhere to device security policies

(866) 844-8080

www.Processor.com/Enforcer

lockdown NETWORKS

Enforcer Hardware Specifications				
	Processor	Network Interface	Power Supply	Weight
Lockdown 1U	Celeron	1 x 10/100/1000 Ethernet	1 300W ATX, PSU with PFC power supply	15 pounds
Lockdown 2U	Dual Xeon	1 x 10/100/1000 Ethernet	1 500W ATX, PSU with PFC power supply	46 pounds

Product 🖱 Releases

PHYSICAL

Racks & Furniture

■ **GizMac Accessories** released the XRack-Pro2, a new 12U server rack. The rack has the same design as the server rack manufacturer's recent 4U and 25U models and offers better cooling than previous models, according to GizMac. It enhanced the server rack's cooling capacity by pulling room air into the server rack closer to the ground and then focusing the air upwards, via the front of the server rack. GizMac also estimates that it reduced noise by up to 80% by using fewer fans than previous models. The 12U XRackPro2 is available for $1,799.99, and GizMac expects to launch a 6U XRackPro2 in the future.

COMMUNICATIONS

Security

■ **AirDefense** announced the WEP Cloaking module to protect the wireless networks of companies that use the WEP (Wired Equivalent Privacy) security standard. The WEP Cloaking module uses wireless sensors to secure handheld devices from passive and active attempts to crack WEP encryption keys. Because many legacy devices only support WEP security, retailers can use the WEP Cloaking module to extend the shelf life of wireless technologies and maintain security. Common handheld devices that would benefit from the WEP Cloaking module include wireless point of sale systems, barcode scanners, and VoIP handsets in use at retail distribution centers.

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■ **IBM** is extending its ISS (Internet Security Systems) intrusion prevention technology to remote network segments (branch offices, ATMs, points of sale, self-help kiosks, etc.) via the addition of the Proventia Network IPS GX3002 to the company's Proventia Network Intrusion Prevention System family. The GX3002, available now, offers ahead-of-the-threat protection for a new layer of enterprise networks and is designed to protect one network segment at up to 10Mbps throughput. Additionally, the GX3002's desktop form factor includes integrated zero-power bypass functionality, IBM says, which ensures high network availability.

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■ Some new firewall and IPS appliances are available or soon will be from **Stonesoft**. The StoneGate FW-1200, FW-1050, and FW-1020 provide enterprise firewall protection for 400Mbps to 2Gbps throughput and six or eight interfaces. Meanwhile, the StoneGate IPS-2000 is a 600Mbps, eight-interface intrusion prevention device meant to be used in conjunction with one of the firewalls for layered defense and maximum

protection. One feature is Stonesoft's patented Multi-Link technology, which facilitates interoffice VPN connections over multiple ISPs.

Switch

■ **TrafficWorks Release 10.0** is the new OS for **Foundry Networks'** ServerIron 4G and ServerIron 4G-SSL switches. TW 10.0 supports an integrated firewall that can protect Web applications from various attacks. It can also speed up Web apps by optimizing the available bandwidth with HTTP compression. Other traffic management features add to the security and overall performance of the system.

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■ **HP** unveiled the ProCurve Networking by HP 1400 Series and 1700 Series network switches, which are easy to install and maintain and provide high-performance and highly reliable connectivity. Ideal for deployment in open spaces, both feature silent operation via a fanless design, resulting in energy-efficient operation. The 1400 Series has two unmanaged Gigabit switches, the 1400-24G and the 1400-8G, featuring plug-and-play simplicity for enhanced collaboration. The 1700 Series has two Web-managed switches, the 1700-24 and the 1700-8, providing reliable network connectivity with basic management and configuration capabilities.

Wireless

■ **D-Link** boosted its Xtreme N series of wireless networking products with the notebook factor ExpressCard adapters and desktop PCI-E adapters. The Xtreme N Notebook ExpressCard DWA-643 brings wireless N connectivity to any notebook that has the new ExpressCard slot, while the Xtreme N PCI Express DWA-556 provides desktops with wireless N capabilities and sports three external antennae. Both cards offer draft-N wireless capabilities, as the standard hasn't yet been ratified. The adapters include D-Link's Quick Adapter Setup Wizard software and support WEP, WPA (Wi-Fi Protected Access), and WPA2 wireless network encryption standards.

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■ **Digi International's** MaxStream unveiled the 2.4GHz XBee Series 2 ZigBee wireless modem networking module, designed for embedded systems. MaxStream created the fully mesh networking-capable XBee Series 2 modules specifically for the OEM and systems integrator markets. The XBee Series 2 features a 16-bit microprocessor, 128KB of flash memory, a chip antenna, a wire whip antenna, a U.FL connector, and an RPSMA connector. The device comes with MaxStream's network configuration software, called X-CTU, and supports coordinators, routers, end devices, and low-power sleep

modes. Development kits will become available by the first of next month for $339.

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■ **Panduit** announced that the PANZONE Wireless Access Point Enclosure is now compatible with more Cisco Aironet products, including the Cisco Aironet 1130 and 1200 Series Wireless Access Points. The PANZONE Wireless Access Point Enclosure is also compatible with optional radio modules that support IEEE 802.11a/b/g. The wireless access point mounts at the bottom of the enclosure, which comes with a connectivity accessory kit with a two-position outlet box, 5e jack, 5e patch cord, and grounding cable. The PANZONE Wireless Access Point Enclosure is wall- or ceiling-mountable, using the optional ceiling bracket kit.

END NODES

KVM & Console Access

■ **StarTech.com** introduced several new DuraView LCD rack-mountable consoles. The 15-inch, 17-inch, and 19-inch Dura-View LCD Rack Consoles secure to two durable steel rails and fit in any 1U server rack slot with a depth of 30 inches or more. The units also feature a mechanical lock; Active Matrix TFT display panel; display, keyboard, and mouse controls; and a rugged housing. IT staff can utilize the new LCD consoles to manage connected KVM switches and servers.

Mobile

■ **HP** unveiled new products for small business customers who require mobility and networking: the HP Compaq 6515b and 6715b Notebook PCs with mobile broadband, Wi-Fi, and Bluetooth wireless technologies. The products provide a choice in the latest AMD processors, including AMD Turion 64 X2 dual-core mobile technology.

Printer

■ **Fargo Electronics** announced two complete card identity systems, featuring the DTC550 and the DTC400 card printer/encoders. The systems include the hardware, software, and materials needed to create secure, professional ID cards. The DTC550 Card Identity System's modular design allows the system to expand with customer needs, including modules for encoding up to three different technologies, lamination for added security and durability, and Ethernet connectivity for card issuance anywhere on a network. The DTC400 Card Identity System is easy to operate, virtually maintenance free, and can be field-upgraded to add dual-sided printing or smart card, proximity, and magnetic stripe encoding.

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■ **Samsung** announced the first in a new line of high-capacity, network-ready multifunction

laser printers with duplex copying, laser printing, color scanning, and high-speed faxing capabilities. The SCX-6345FN MFP supports print and copy speeds up to 45ppm in letter size and produces high-resolution documents with up to 1,200dpi effective output. The SCX-6345FN MFP produces scans in color with up to 4,800dpi (enhanced) scanning resolution. This multifunction printer features an LCD touchscreen and supports up to three additional paper trays to expand the paper capacity up to 2,180 sheets. The SCX-6345FN MFP offers enhanced features such as a standard 40GB hard drive and automatic duplexing; the ability to send scanned documents through email, FTP, SMB, and client; a Web monitoring feature called SyncThru Web; and more.

Projector

■ **BenQ** launched the SP830/831 WXGA DLP digital projectors. These projectors have high ANSI lumens at 3,500/4,000 and are compatible with Windows Vista Basic. Additional features include an HQV (Hollywood Quality Video) processor, Texas Instrument's BrilliantColor technology, 1,280 x 768 WXGA (Wide Extended Graphics Array) resolution, a contrast ratio of 2,000:1, and 2D Keystone correction. The embedded HQV processor delivers performance with de-interlacing, noise reduction, and scaling functions in both standard- and high-definition signals. Both projectors feature a zoom control function and an offline cooling function for automatic cooling after unplugging the projector. Furthermore, these projectors have various inputs, including DVI-I with HDCP (high-bandwidth digital content protection), component, composite, and S-video inputs.

Servers

■ **HP** unveiled the ProLiant ML115 server, an affordable, entry-level computing solution built with the needs of small and medium-sized enterprises in mind. Designed to meet the growing IT and budgetary demands of SMEs while optimizing business outcomes, the ML115 combines ProLiant technology with the latest AMD Opteron processor. It is for SMEs looking to add more horsepower to their business and is ideal for networking, file-and-print, shared Internet access, small team email, and LAN infrastructure. It is powered by dual-core AMD Opteron 1000 series or single-core AMD Athlon 64 3500+ processors.

Storage

■ **Addonics** released devices that let users replace their standard 2.5-inch IDE or SATA hard drives with CF or Micro Drive media. The CF Hard Drive Adapters, which do not require any drivers or other software, slip

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Product Releases

into the notebook hard drive area of your notebook and connect to the notebook's IDE or SATA connector. Customers will need to add CF media to these adapters. Addonics believes customers will be attracted to the lower power cost and increased shock resistance of CF media as compared to hard drives. The adapters support Linux, Mac, Solaris, and Windows OSes and appear as standard hard drives, and the CF drives can be used as boot devices. The IDE - CF Hard Drive adapter is available in a single-slot version for $24.99 and a dual-slot version for $29.99. The SATA version is available for $35.99. Addonics is also offering an Embedded 44-pin IDE - CF adapter for industrial PCs. The single-slot, SFF version is available for $24.99, and the dual-slot version is available for $29.99.

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■ **HP** unveiled HP StorageWorks Media Vault Pro for small business customers. It enables businesses to better meet their growing needs through expandable network storage and enhanced protection services. The drive will ratchet up to 1TB and is available for less than $1,000.

■ The Power Pro Desktop Hard Drive is **Iomega's** latest external storage option for Windows and Mac computers. It holds four 500GB hard drives and provides up to 2TB of storage, depending on the type of RAID the user selects (listed RAID options include 0, 0+1, 5, and 5+). EMC Retrospect Express backup software comes standard, and an LCD panel reports on available capacity, temperature, and other details. Supported interfaces include FireWire 800/400 and USB 2.0.

Workstation

■ **HP** announced the HP Compaq dx2300 Business Desktop PC, which features an Intel Core 2 Duo processor, an Intel946GZ Express chipset, and an Intel PRO/100 VE Network Connection. It also features a compact microtower, front access USB 2.0 and audio I/O ports, and an optional 16-in-1 media reader for quick access to digital files from a variety of media types.

SOFTWARE

Business Productivity

■ **Pervasive Software** announced Pervasive SaaS Data Integrator and Pervasive SaaS Business Integrator, which provide SaaS (software-as-a-service) integration through a subscription-based model. Pervasive software included SaaS connectors to CRM (Customer Relationship Management) systems, such as Salesforce.com's Spring '07, Oracle Siebel CRM OnDemand 12, and NetSuite, to provide compatibility with systems such as SAP, Oracle, and Microsoft Dynamic CRM. The software also now has more options to view the same data for data source and target mapping. Entry-level pricing starts at $300 per month.

Network & Systems Management

■ **Aldebaran Systems** announced the availability of version 4.0 of its ServerAssist server monitoring software. The ability to monitor non-Windows devices enhances this version, and it lets IT workers proactively identify conflicts in devices such as switches, routers, printers, and any device supporting SNMP. With this information, IT techs can fix problems before they happen. The company says initial setup of ServerAssist is quick and can be deployed over the network from an administrator's desk. The app offers MMC snap-in and Web-based interfaces, and both interfaces are capable of managing local and remote computers. A free evaluation version is available for 30 days.

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■ **ipMonitor** announced the availability of its ipMonitor 8.5 software, which represents a major update to the company's network monitoring software. ipMonitor says the new version makes major strides in usability and visualization through the app's Web-based interface. To help streamline access to information and simplify other tasks, this version has such next-gen controls as interactive drag-and-drop editing and report zooming. This version also offers new Monitor types, Report types, and mass edit capabilities. Additionally, version 8.5 is Vista-ready. Pricing ranges from $995 for 500 monitors to $2,995 for 5,000 monitors.

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■ **Lancope** announced an updated version of its StealthWatch System, a performance monitoring, anomaly detection, and network behavior analysis and response platform. Designed for enterprise organizations, StealthWatch System v5.6 includes Live Alarms, which gives the ability to view only active network events; High-Performance Flow Queries, which allows the user to view current and past network flows; Dynamic Data Aging and Storage Optimization, for prioritizing network traffic and security data; and Failover Configuration, which helps maintain business continuity and aids in disaster recovery. The software is also fully interoperable with Foundry Networks' IronView Network Manager.

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■ **Opsware** announced the Opsware ITIL Acceleration Solution, which helps companies both implement and manage ITIL (Information Technology Infrastructure Library) processes and maintain a single system to log rapid reconciliation of those processes. Opsware ITIL Acceleration Solution combines data and process requirements and includes Visual Application Manager, OMDB (Operational Management Database), and process automation solution. The software provides tools for discovery, visualization, integrated process automation, reporting, integration, and federation.

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■ **ScriptLogic** released the newest iterations of its Desktop Authority and Desktop Authority MSI Studio software, which aim to assist organizations as they migrate to Vista. Desktop Authority 7.6 lets IT staff manage and configure enterprise workstations based on end-user profiles. It also manages Vista's User Access Control, the Vista Desktop, Windows Firewall, and IPv6. Desktop Authority MSI Studio 3.6, which administrators can use to tailor MSI (Microsoft installer) packages to meet the organization's specific needs, includes new features such as Vista compatibility, a restart manager, User Account Control, and enhanced logging. Desktop Authority 7.6 and Desktop Authority MSI Studio 3.6 are available on a per-user and per-administrator basis, respectively.

Security

■ **GFI Software** released the GFI LANguard NSS (Network Security Scanner) 8 to provide software for security scanning, patch management, and network auditing. GFI LANguard NSS 8 scans the network for more than 15,000 vulnerabilities, identifies possible security issues, and provides administrators with tools to manage and remediate threats. The software finds security risks with its built-in vulnerability assessment functionality, as well as with SANS top 20 and Open Vulnerabilities Assessment Language security definitions. GFI LANguard NSS 8 also includes an enhanced scanning engine, additional patch management functionality, and a graphical threat level indicator. Version 8 supports rollback for Microsoft patches, as well as technology to automatically download new Microsoft security patches.

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■ **Kaspersky** released its KOSS (Kaspersky Open Space Security) suite of business security products, which aims to extend protection to the mobile and distributed workforce areas. The company also released updated versions of its Anti-Virus 6.0 for Windows Workstations, Anti-Virus for Windows Servers, and Administration Kit 6.0. KOSS, which is built on the company's Anti-Virus 6.0 engine, includes four tiers of protection, depending on the level of protection that's needed: Work Space Security, Business Space Security, Enterprise Space Security, and Total Space Security. Version 6.0 of the engine also includes Proactive Defense, which provides anti-malware updates and protects against new vulnerabilities and zero-day attacks.

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■ **Tenable Network Security** introduced improvements to its Security Center intended to aid organizations with regulatory compliance. The security monitoring program now has greater capabilities in monitoring and identifying sensitive "data at rest" and "data in motion," as the company puts it. Security Center pricing starts at $18,900 for 500 servers.

Storage

■ **Quantum** announced StorNext 3.0, which provides tools for managing a company's data. The latest version lets users share data across servers on a LAN and includes Quantum's deduplication technology. Companies can use StorNext to add storage or to replace storage hardware without taking the system offline. Among version 3.0's new features are Distributed LAN Client, for accessing shared storage; Data Reduction Storage, for reducing storage needs by using data deduplication; and Dynamic Resource Allocation, for enabling online service operations. StorNext 3.0 will ship in Q2.

SERVICES

Data Center Services

■ **HP** announced several new additions to the Total Care for Small Businesses portfolio, including HP Total Care Advisor. Total Care Advisor now includes Easy Printer Care Software 2.2. Financing options for small businesses are another addition, with promotional lease rates available for a limited time. For small and medium-sized enterprise customers who already have integrated PC security protection, HP now offers the HP Smart Data Protection Service to protect data from a variety of threats. Additionally, HP has expanded its small and medium-sized business Web site to include a new section called Small Business Connection.

Storage

■ **AmeriVault** announced the AmeriVault-DG to provide a digital archiving service that accommodates storage for static, less-accessed data, such as marketing files, agency work, and project data. The AmeriVault-DG provides a basic search capability to locate files quickly, and it allows users to retrieve larger volumes to a portable disk device. AmeriVault also released ATS (AmeriVault Tiered Storage), a life cycle service to automatically migrate older backup retentions to vault storage. ATS is used in conjunction with AmeriVault's online backup service, AmeriVault-AV. ATS allows companies to set up policies for migrating less-critical backup retentions to more cost-effective disk storage. Companies are then able to keep more critical backup data on premium storage.

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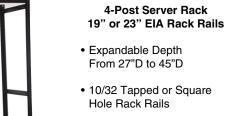
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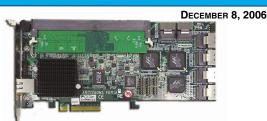
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OPINIONS
DATA • DEVELOPMENTS

Microsoft's Developer Focus—Or Lack Thereof?

I'm writing this editorial using the last of my laptop battery while trapped at DFW airport. An American Airlines flight out of Orlando had mechanical problems, which made me miss my connecting flight. It seems that this continues to be a disquieting trend that I expect to lead to disaster. I pray it doesn't. I would plug into the $2 power outlets AA installed here to squeeze another dime out of weary travelers, but my Kensington universal power supply died somewhere between Redmond and Orlando, so I have no way to charge my laptop or phone.

I put my life in the hands of the airlines again to speak at the "Connections" conference in Orlando, which includes SQL Connections, Visual Studio Connections, and several others hosted at the same venue. The advantage of this type of mixed-discipline conference is that it gives DBAs (who would ordinarily go to the SQL talks) a chance to see what's new or to get up to speed on other disciplines and Visual Studio types a chance to review SQL Server, ASP, Mobile, and SharePoint content. They treat speakers and attendees pretty well at Connections.

Microsoft Pushing Its New Blenders & Ginsu Knives

Microsoft was there (it gets a whole day to show off its newest tools and gadgets) to whip up support for LINQ and ERM (Entity Relational Modeling), among other new-fangled gadgets. At one of the side meetings, I was (almost literally) assaulted by a Microsoftie who was pushing ERM. I told him that I was not thrilled that Microsoft had pushed this out so fast. Along with LINQ, ERM is supposed to be an integral part of the Orcas (and probably the Katmai) releases (the next versions of Visual Studio and SQL Server).

My biggest problem with these "innovations" is that the Visual Studio, Visual Basic, and C# (and SQL Server) teams have a long list of issues that have been raised by you and me (some for as long as a decade) and are yet to be addressed. Microsoft keeps telling us that there are just so many re-sources (Microsoft developers, product managers, marketers, testers, and doc writers) and money (to buy more) that it can bring to bear on developer tools. I totally understand that. What I don't understand is why it does not apply those limited resources on the bug fixes, incomplete implementations, and documentation of the stuff it innovated in the last version and the version(s) before that. You know, "finish what you started." Most every IT developer I interviewed reported problems with the existing Visual Studio or SQL Server 2005 releases. Very few (if any) asked for new features. Some of these long-awaited issues include:

Better, more complete support for existing architectures. Especially those built around SQL Server (and other DBMS) stored procedures and views. Basic Parameter collection builders would be a good start. We had these in Visual Basic 6.0 and in Visual Studio 2003. They were removed in Whidbey. Given that most (the vast majority of) disciplined DBAs don't even expose the base tables, all of these wizards and code generators are so much fluff. I would also like to see more integration with SQL Server 2005 Service Broker.

Better rights management. For some reason, there are no tools whatsoever in Visual Studio to help developers manage data object (schema) rights. I guess they still assume that all developers will install SQL Server Express on the client system and run it using SA credentials. Sigh. Sometimes I worry about these folks. We've asked for support for "developer," "end user," "admin," and other "personas" for some time. This way, one could test the application while emulating the rights granted to each persona.

A better front-end for new application developers. If Microsoft really wants to help Microsoft Access and low-skilled developers transition into programming more serious (and secure) business applications, I think it needs a wizard to help it decide which fundamental architecture it needs to use: ASP, Windows Forms, single- or multi-user, which deployment model, and all of the other details that really govern how an application is designed from the ground up.

Better documentation. As I visited each of the new technologies writing my latest book, all too often I found the documentation only partially done. F1 is often broken, and the topics themselves (if you can find them) are often shallow and sometimes just wrong. It's clear from my conversations with insiders on the team that they need more funding and more writers who understand the topics they are documenting.

I could go on, but you get the idea. I'm sure you have a long list of issues and features you would like to see in Visual Studio, Visual Basic, and C# but didn't know how (or didn't have the patience) to let Microsoft know. I encourage you to use Connect (connect.microsoft.com) or simply pass your suggestions to me. I'll keep the pressure on the dev teams until they run me out of town.

Send your comments to bill@processor.com

WILLIAM (BILL) VAUGHN

AUTHOR

William (Bill) Vaughn is an industry-recognized author, mentor, trainer, and subject-matter expert on Visual Studio, SQL Server, and ADO.NET. He's worked in the computer industry for over 30 years, including 14 years at Microsoft. He's written seven editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and three editions of "ADO.NET and ADO Examples and Best Practices." Vaughn and Peter Blackburn also wrote the best-selling "Hitchhiker's Guide to SQL Server 2000 Reporting Services." Visit his Web site at www.betav.com.

What's Up With Centralized Storage?

An Overview & Issues To Consider

by Kurt Marko

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CONSOLIDATION HAS BEEN an enduring theme of IT strategy for many years—IT departments have been increasing control over their costs and infrastructure by centralization and standardization. Although server consolidation using virtualization has been red-hot the past couple years, merging of scattered direct-access storage into a unified infrastructure has been a quieter, but still common, trend.

As data storage demands continue unabated, a centralized storage architecture has offered the best hope for efficiently increasing capacity with minimal disruption to production systems. According to a recent study by IDC, the amount of information created or captured in digital form is growing at an annual rate of 57%.

Originally enabled by dedicated, high-performance SANs, centralized storage has evolved to include Ethernet-based NAS servers and tiered storage, incorporating lower-cost, "near-line" arrays and archival backup devices, all lumped under the generic moniker file area networking, or FAN. If your SME is considering a move to centralized storage, it's wise to examine the concepts, technologies, and tools underlying storage consolidation and the business rationale, benefits, and potential problems associated with centralization.

Storage Costs & Consolidation Benefits

According to Symantec (www.Processor.com/SymantecCorp), the costs of meeting ever-expanding storage needs without a centralized architecture are numerous. They include poor resource utilization due to inefficient use of capacity; increased system management costs for the burgeoning number of servers and disks; tool proliferation (often a different one for each platform and vendor), causing inefficient complexity; and difficulty in meeting new storage demands, causing laggard response to new demands.

The benefits of storage consolidation are manifold, says Tom Pisello at Alinean (www.alinean.com), a provider of IT ROI/TCO sales tools. Paramount is the more efficient use of resources; pooled storage eliminates the need for unused capacity on each server and reduces the need for standby storage because redundant drives aren't required for individual servers.

Pisello says consolidated storage pools further enhance efficiency by enabling automated SRM (storage resource management) tools that can enforce usage quotas and eliminate redundant storage of files using disk deduplication technology. Furthermore, Pisello claims that it reduces administration costs, leading to "better storage-per-administrator ratios." Centralized storage infrastructure, often using high-performance arrays and storage networks, also serves to reduce backup windows and data restore times. Finally, Pisello says that a consolidated infrastructure improves uptime by use of hardware with built-in redundancy and software technologies such as snapshotting, mirroring, and vaulting, which taken together can achieve "99.995% availability or higher."

Andrew Hillier, CTO and co-founder of CiRBA (www.Processor.com/CiRBA1), a software vendor specializing in server consolidation and virtualization planning, notes that aside from the efficiency and reliability business advantages of a consolidated infrastructure, centralized storage is necessary to deliver the full benefits of a virtualized server environment. Hillier also points out that as virtualized, industry-standard (read x86) servers commodify the compute infrastructure, "storage and data becomes the center of the infrastructure," prompting the need for "a new level of sophistication around data management."

Maxwell Riggsbee, CTO of file services at Brocade (www.Processor.com/BrocadeComm), cites the ability of centralized storage to enable more effective data replication and backup without disrupting users. He notes that many companies have adopted a disaster recovery/business continuity architecture using a secondary location for backup and have found that replicating data from a consolidated storage pool is much easier than from dozens of disparate servers. He also points out that ancillary benefits of consolidated storage are its facilitation of enhanced information lifecycle management services such as data classification, indexing, and search.

Consolidating Storage: Architectures

Underpinning any centralized storage implementation is one or both of the major storage network technologies—dedicated SAN, primarily used for block-level storage such as databases, or LAN-based NAS, used for file storage such as personal directories or email. Greg Schulz, founder of storage consultancy StorageIO (www.storageio.com), points out that the line between these two is blurring with many companies, such as NetApp (www.Processor.com/NetworkAppliance) with its StoreVault line, HP (www.hp.com) with its AiO 400 and 600, and newcomer NSC (Network Storage Corp; www.spanstor.com), featuring converged SAN/NAS products targeting SMEs.

FAN, the generic term Brocade and others adopted to describe the panoply of connected storage technologies, can also incorporate hierarchical storage management, often known as tiered storage, to migrate infrequently used data from high-performance (and costly) devices to lower-cost near-line or archival media.

StorageIO's Schulz sounds one note of caution to those planning centralized storage. He says administrators shouldn't just look at optimizing space utilization and disk capacity but should also ensure that performance doesn't suffer. Consolidated storage infrastructure can lead to I/O bottlenecks and added latency anywhere from individual disk mechanisms or arrays to LAN or SAN paths connecting array and server. Schulz also advises that when consolidating storage from remote sites, look at techniques such as WAN accelerators or other forms of local caching for decreasing I/O latency for time-sensitive applications.

Tools & Processes

Managing a large and growing storage pool is challenging, particularly with tight staffing common in most IT departments. While storage systems and networking hardware generally ship with some sort of administrative utility, integrating heterogeneous tools and devices into a unified management console has proven challenging and is a niche filled by a number of third-party software vendors targeting comprehensive SRM.

Rick Clark, president and CEO of APTARE (www.aptare.com), notes many of its customers found "connecting [storage] systems was the easy part; managing it was a nightmare." He says one of the issues that earlier attempts at SRM faced was attempting to do too much, made all the more difficult by the dearth of management interface and protocol standards for storage hardware (think SNMP for network devices). For this reason, APTARE has initially focused on problems with backup and recovery.

Without automated management tools, Clark feels it's impossible for companies to scale their storage capacity and backup frequency while meeting increasing application availability and regulatory requirements. He cites an example of a customer who, using APTARE's automated tools, increased the number of backup jobs per day, over a much larger data set, by an order of magnitude, all while reducing the number of people managing the storage infrastructure.

Consider The Benefits

Consolidating storage promises to increase hardware efficiency and utilization while offering new prospects for information management and control. These benefits can be saddled with a complex environment requiring highly trained staff and sophisticated management tools. While the hardware to implement a highly concentrated storage infrastructure is stable and standardized, administrative software and information lifecycle management tools are still maturing.
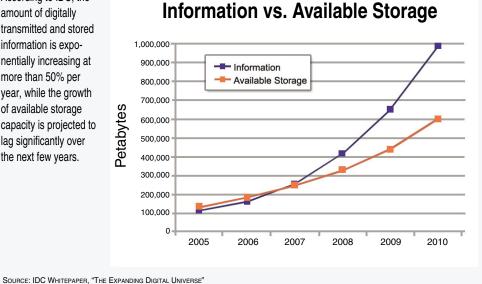
Growing Storage Needs

According to IDC, the amount of digitally transmitted and stored information is exponentially increasing at more than 50% per year, while the growth of available storage capacity is projected to lag significantly over the next few years.

Information vs. Available Storage

SOURCE: IDC WHITEPAPER, "THE EXPANDING DIGITAL UNIVERSE"

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Where Is Cisco's AON Going With Network "Intelligence"?

Not Everyone Agrees On This Technology's Value

by Robyn Weisman

• • •

UP UNTIL RECENTLY, networking manufacturers were primarily concerned with what is referred to as "content networking," networking devices that are packet-based and designed to load balance outbound traffic to a pool of network connections and cache popular content closer to the "door" for faster delivery.

Cisco Systems (www.Processor.com/CiscoSystems) has been taking things a step further and has been developing what it calls AON (application-oriented network) technology, a combination hardware and software solution. Peter Linkin, director of marketing for data center solutions at Cisco, says that AON enables networks to interact with applications and become more involved in the individual traffic flows on a network. Instead of a network seeing just a packet, it can actually read the data inside the packet so that a user can find out, for example, that of two purchase orders, one is worth $1 million while the other is worth only $13. Knowing this, a user may then prioritize which purchase order ought to take precedence in the supply chain.

But how viable is AON? Linkin says Cisco has several large clients using the technology. Moreover, Cisco recently purchased XML gateway provider Reactivity, whose technology does the same sort of intelligence that AON purports to do, at least for Web services and service-oriented architecture projects.

"I think AON is a myth," says Bill Kish, CEO and CTO (aka "Alpha Coyote") at Coyote Point Systems (www.Processor.com/Coyote), a maker of application delivery controllers that, at least in theory, compete with Cisco's AON offerings. "I have been looking for months, and I have yet to see one in the wild. . . . To our knowledge,

> ## Cisco Systems has been developing what it calls application-oriented network technology, a combination hardware and software solution.

Cisco's recent acquisition of Reactivity signaled that AON is DOA."

Reactivity Reaction

For his part, Mark Fabbi, vice president and distinguished analyst of enterprise communications at research firm Gartner, says that while he would not put things quite as Kish does, he does not think Kish is far off in his assessments.

"AON has not seen any noticeable success and is rarely mentioned by even our biggest clients. Real production deployments of AON are extremely rare. Partly this is due to initial product challenges—from our perspective all of the initial beta customers stopped working on AON, and it's only recently that Cisco has been able to start ramping up activity again," says Fabbi.

"The other issue is [AON's] vague value proposition. Cisco's lack of understanding of the application world made this a difficult challenge for Cisco," Fabbi adds.

In a recent news analysis that Gartner published, Fabbi and fellow Gartner analyst L. Frank Kenney recommend their customers avoid making any purchase decisions on AON until Cisco clarifies its intentions for AON's platform. "Given the advantages of the Reactivity platform, we expect the current AON platform to have a short life span," they write. At the same time, the analysts tell current Reactivity customers to see the acquisition as a positive move because "it appears to remove any concerns about the technology's long-term viability."

The Right Choice

For Linkin's part, it's an analyst's prerogative to come up with certain conclusions; however, Linkin insists that people are using it in real business settings and finding value from AON. "It's a matter of customer choice, and it depends on the problem one is addressing," he says.

Moreover, Linkin points out that unlike Reactivity, AON from day one was not designed to be purely an XML optimization technology. "There is lots of data that is still not XML-like [data coming from] IBM mainframes, IBM MQSeries, Microsoft, and others," says Linkin.

Whatever AON's efficacy, Gartner's Fabbi says that AON has been targeted primarily at the large enterprise level with a fairly open-ended and vague suite of capabilities not suitable for an SME. He adds that there are other "Application Fluent" technologies that solve the problems facing midsized firms without requiring the high level of customization required for AON.

What Is Network Intelligence?

Mark Fabbi, Gartner vice president and distinguished analyst, defines intelligence in the network as being "application fluent." According to Fabbi, the idea behind this approach is fairly new to the networking industry, which is at best "application aware."

"Traditional networks made of switches and routers may know what application or applications are running on the network, but other than some basic prioritization, can't really do anything that impacts the performance of the application," Fabbi says.

Unlike traditional packet-based networks, application fluent networks understand the context of what is running on them. "It can understand who is using the network, what [he or she is] doing, and it can understand elements of the transaction and exactly what the data represents," Fabbi says. "With this knowledge, a whole new range of capabilities become possible."

"Application delivery controllers (ADCs) are devices that have grown out of the load balancing market that provide sophisticated services to improve the availability and performance of browser-based applications," according to Fabbi. "Evidence that this technology applies [to small to medium-sized enterprises] is the strong growth of Coyote Point in the past couple years."

In addition, WOCs (WAN optimization controllers) also apply to small to midsized enterprises, says Fabbi. "These devices can improve performance and reduce the bandwidth required to support branch offices," he says. "We're seeing deployments of WOCs range from relatively modest deployments in SMBs to hundreds of branches in large enterprises."

Putting Application Networking Services Into Focus

According to Peter Linkin, director of marketing for data center solutions at Cisco Systems (www.Processor.com/CiscoSystems), Application Networking Services, or ANS, enable networks to accelerate, streamline, and optimize network content for users to access content without the network grinding to a halt.

"A lot of different impacts [are put] on the network. For instance, opening up a Microsoft Excel spreadsheet [that's on a given network]. It [can take] 1,600 roundtrips between you clicking open the spreadsheet and where the application is, and if you're sitting 1,000 miles away, that makes a big difference," says Linkin.

Users "need the ability to go all the way from the application is actually sitting on a computer somewhere in a data center all the way through Web servers and load balancing and provisioning and access control and all that good stuff and then have content optimized over a wide-area link to somebody's browser and compensate for all of the lag, all of the inertia, all the oddities in performance that might exist between where the application started from and where that content is being consumed, so that the interaction ends up being a good experience for the user," Linkin says.

In short, application networking optimizes an application without having to change even a line of code within that application, which is much cheaper than having to go in and customize code, says Linkin. "The goal is to make applications look better to users no matter how they're using it and no matter where they are."
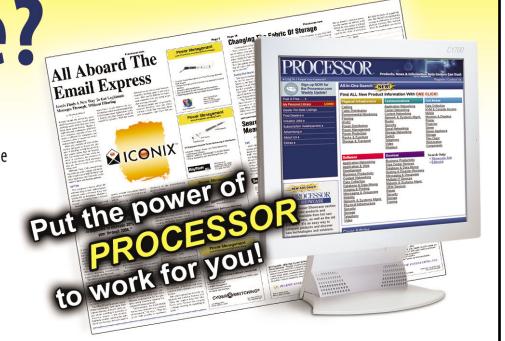
Taming The Storage Lion

Tips For Better Management

by Curt Harler

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IT MANAGERS TRYING to control storage costs at many companies must feel like lion tamers at a circus gone wild. The budget director is snapping the whip on costs. Users are gobbling up network resources. And the boss is growling about performance. There are ways to reclaim this three-ring circus from the lions; we turned to several experts for tips for regaining control over enterprise network storage needs.

Zero In On The App

First and foremost, focus on the application, says Bob Spurzem, director of product marketing for Mimosa Systems (www.mimosasystems.com). "Each application has its own growth characteristics, availability requirements, user requirements, and storage demands. Speak with the business owners who are responsible for each application to gather this important information. Take for example email storage management. The person to speak with is the messaging administrator. This person can tell you about numbers of users, storage growth per users, recovery requirements, data retention requirements, etc. Email also presents storage challenges for its local storage requirements on desktops. With a clear picture of email storage on both of the servers and desktops, then an improved storage strategy can be developed."

Eran Farajun, executive vice president of Asigra (www.Processor.com/Asigra1), says, "Leverage a light, nonintrusive application to limit the need to install agents on the targeted computing environment." This will eliminate the need to qualify and approve new software installations across departments, saving significant deployment time.

Reduce Labor & Resources Used

Next, Farajun says, use managed backup providers to minimize the impact that the backup process has on IT resources, both from a manpower and hardware/software perspective. That labor component is key.

A unified backup architecture that removes the islands of tape-based backup systems and instead consolidates all backup processes using one system significantly cuts down on the hardware, software, and management resources necessary to conduct successful data restores when called upon, he adds.

"Keep in mind that while most environments focus on reducing storage costs of hardware, the real savings are around reducing management and data protection costs without negatively impacting storage service delivery," says Greg Schulz, founder and senior analyst at StorageIO (www.storageio.com). He recommends looking for ways to more effectively use and manage storage, including virtualization for transparent data movement and migration along with more effective data protection.

"Virtual servers using, for example, VMware VI3 [www.Processor.com/VMware] are enhanced and complemented by virtual storage and enhanced data protection," Schulz says. NAS is a great solution to address storage management. NetApp (www.Processor.com/NetworkAppliance), BlueArc (www.Processor.com/BlueArc-Corp), EMC (www.Processor.com/EMCCorp), Microsoft (www.microsoft.com), ONStor (www.onstor.com), and HP (www.hp.com), and others offer solutions. "NAS combines file-based data and storage sharing, storage virtualization, and a built-in management layer compared to traditional block-based storage," he says.

Richard Krueger, vice president of marketing and alliances for CaminoSoft (www.caminosoft.com), says the first place to start is to allocate high-cost, high-performance production storage for active, business-critical files and lower-cost, lower-performance storage and digital archives for inactive or seldom-accessed files.

Eliminate out-of-production-disk-storage space issues. "Be sure to meet backup and recovery window service level agreements," Krueger says.

Streamline Everyday Storage

Use NAS and virtualization to address and simplify day-to-day storage management activities, including data protection, provisioning, and migrating data across different tiers of storage. Data protection includes point-in-time copy or snapshots and replication that are now affordable for environments of all sizes.

"Clustered storage (block or file) is often mistakenly thought to be just for high-performance, high-bandwidth supercomputing environments," Schulz says. "However, the reality is that iSCSI, Fibre Channel, and NAS-based clustered storage provide modular growth and scale in terms of performance, capacity, and ease of management with built-in virtualization to simplify storage management."

Schulz continues, "Unless your strategy is to constrain or restrict data storage growth, or in other words, storage management via abstinence, look for ways to enhance and increase the effectiveness of your storage management activities. Rather than looking at how to manage less storage, look at tools and techniques that enable you to more effectively manage a growing amount of storage while enhancing service delivery. That comes down to leveraging virtualization technology that works for you to integrate into your environment; look for storage solutions that include built-in management and virtualization capabilities."

Some other techniques include making the upgrade to one of the newer, more robust storage systems that provide block and file and built-in virtualization and management.

Use Tools & Techniques To Your Advantage

Data deduplication is another way to manage storage expansion by greatly limiting the hardware requirements needed to store corporate information. "The biggest users of storage hardware are found in the backup infrastructure with multiple copies of backup data requiring the bulk of storage space," says Farajun. "Data deduplication greatly reduces this requirement. Incremental backup technology only backs up new and changed blocks of files, vastly reducing the total amount of stored data."

"Tools permit easy what-if storage characterization for establishing network-wide file migration rules and policies, and utilities enable straightforward platform migration (NetWare to Windows, NetWare to Linux) without denigrating archived files back to production storage," Krueger says.

He recommends software that moves inactive or seldom-accessed files to lower-cost storage, freeing up production resources. The software should leave small pointers on production storage as full files have been migrated to next/archival tiers.

"This frees up IT and replaces ad hoc policy-making with automated, user-transparent file management," Krueger says. "Also, set migration, retention, and deletion policies for files that have been stored in the archive." P

Improvement On The Cheap

Want some low-cost or no-cost ways to improve storage? Here are some tips.

"Develop a storage management strategy that takes optimizing technologies into account is the first step for maximizing legacy storage, as well as optimizing any newly purchased hardware or software," says Eran Farajun with Asigra (www.Processor.com/Asigra1). "Work through the implementation and management process before moving forward, or have vendors present valid arguments, backed by ROI/TCO measurements, before harnessing the new capabilities the technology has to offer."

Greg Schulz with StorageIO (www.storageio.com) says, "Make sure that your storage is safe and secure and accessible. Look at technologies like compression and compaction to maximize storage space along with archiving."

Mimosa Systems' (www.mimosasystems.com) Bob Spurzem's advice is to plan carefully before you deploy new storage. "Ask the tough questions of the users who demand more storage," he says. "The temptation is to just add more storage without understanding the underlying drivers. When you understand the underlying driving impacting storage, then you can plan storage more efficiently."

Another option is to run CaminoSoft's (www.caminosoft.com) free Storage Analyzer tool from a networked Windows PC and do a file system assessment on storage volumes. No server installation is required. Results are categorized on the basis of file creation date, last accessed date, and last modified date over admin-defined time intervals. This characterization can be used as a guideline in setting up initial policies once Managed Server HSM software has been installed on the server.

WHAT'S HAPPENING

Load Balancing & Traffic Management

Coyote Point Offers Bigger & Better With Fewer & Less

by Julie Sartain

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WE ALWAYS NEED TO DO MORE with less. Every few years, IT departments upgrade their equipment, adding either more of the same or less with more power.

Coyote Point Systems (www.Processor .com/Coyote) has the performance and value solution for today's billion-dollar market in load balancing and traffic management solutions. It develops technology to meet the needs of customers, and it gets most of its ideas by listening to those customers describe the day-to-day issues they face in building and maintaining their server networks.

"Coyote Point's mission is to deliver high-quality Internet traffic management products that are easy to deploy, intuitive to use, and make our customers' jobs easier," says Bill Kish, CEO/CTO at Coyote Point. "Extending our philosophy to our products, our Equalizer Series traffic management appliances are designed to be affordable, easy to deploy, and even easier to manage by businesses of every size and type."

According to Kish, Coyote Point's products deliver twice the performance at half the price of competing alternatives and include the features required by virtually all Web sites and data centers.

"The prevailing philosophy at Coyote Point is to provide the features our customers say they need, not what our marketing department thinks they'll buy," says Kish.

Coyote Point's Equalizer Series, which includes the E250si, E350si, E450si, and E550si, performs server load balancing and Layer 4-7 application traffic management, and the SSL acceleration module handles encrypted session traffic, adds Kish.

Design Challenges

"But there were quite a few challenges for our hardware and software design teams when we created our new products," says Kish. "The goal with the E550 product was to improve performance (throughput and transactional capacity) by at least 30% over our previous generation of products. Our hardware team needed to do this without changing the 1U form factor, keep airflow and cooling within specs, and always with strict cost constraints in mind. At the same time, we needed to redesign our entire product line to meet European RoHS environmental standards."

The software team was busy, notes Kish, designing drivers for the high-performance network interfaces and switch components that were to drive the performance goals. A few software modules were completely redesigned to boost performance further.

Kish is the architect for the product designs. He recognizes today's Internet-centric organizations are forced to scale their network infrastructure and improve performance to support growth—but they must do this with less money and fewer people.

Traffic management solutions are ideal for helping companies achieve this goal, notes Kish. Unfortunately, in trying to gain a competitive edge, much of the industry has continued to add layers of complexity to products, overbuilding features and functions that make products harder to manage and more expensive. The focus on ideal product utility is lost. "You don't have to choose between performance and price," says Kish.

How It All Began

Coyote Point recognized a need for intelligent application traffic management. "We

CoyotePoint Systems Inc

wanted to create network infrastructures that work all day, every day, no matter what happened," says Kish, "and we wanted to use a 'box' instead of a bunch of fancy software."

According to Kish, it began as a sketch on the back of a placemat, and that became the framework for a multiarmed Internet routing system. Less than two years and 15 versions later, the industry's most agile, intelligent cluster-management suite was born.

Benefits & Support

Customers include SMEs plus the Web operations for enterprises of every size and type, says Kish. This market is reached through a network of value-added resellers and international distributors. The Coyote Point "Partner Program" is designed to support the company's channel strategy and provide the highest level of pre- and post-sales resources and support to and through its worldwide network of distributors, technology alliance partners, VARs, management consultants, and system integrators.

Coyote Point drives sales engagement programs to bring new business to its partners, providing tools and communications including a Partner Resource Center, newsletters, marketing support, and sales tools, Kish notes.

Future Plans

"We're always extending the capabilities of our load balancing and application traffic management technologies. Because our products sit between servers and clients in the most rapidly evolving area of software technology, the World Wide Web, we have to be responsive to these changes," says Kish.

One example is the introduction of RIA (rich Internet applications) based on technologies such as AJAX, Kish notes. RIA provide users with the types of interfaces they've come to expect in desktop applications, but this comes at a cost of increased server load as more short-lived connection requests are produced by Web browsers.

Coyote Point's upcoming 7.2.4 software release contains optimizations to accelerate these types of requests and offload much of the work that otherwise would have needed to be managed at the server level. Other upcoming enhancements include faster SSL acceleration functionality, support for additional Layer 7 protocols, and new management features, Kish says.

"A current customer considered Coyote Point, Cisco, F5, and Barracuda Networks for its new load balancing solution—they wanted the E550si because of the combination of its feature set, performance, and price," says Kish. "This product has an impressive array of load balancing features that this customer could not find in any other unit, so they purchased the E550si because they said the price-performance ratio could not be beat." P

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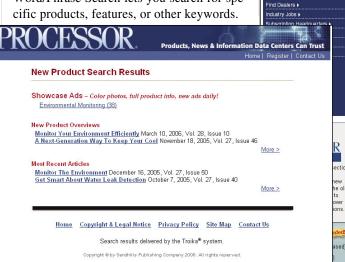
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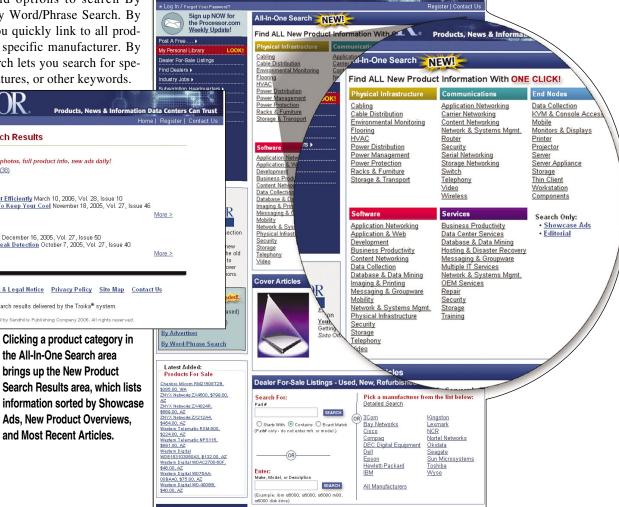
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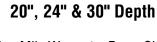www.Processor.com/RackmountSolutions18

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